

## LOW-INCOME HOUSEHOLDS AND INCOME VOLATILITY

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- **Family income volatility has increased over the past three decades, though the trend for individual earnings volatility is less clear.**
- **Low-income households have more volatile incomes than do higher income households and this gap has grown over time.**
- **Job losses, reductions in employment hours, and loss of working adults in a household were the most common factors associated with large income drops. Additions in working adults and work hours, and increased wages were the most frequent causes of income increases.**

### The Importance of Income Volatility

Income inequality in the United States has increased significantly over the last four decades, as families at the top of the income distribution earn more and the earnings of those at the bottom have largely remained constant.<sup>1</sup> However, a household's well-being is not simply a function of *level* of income, but also of how income fluctuates over time. These fluctuations, particularly when they are unpredictable, may make it difficult for families to maintain basic expenditures for food, transportation, and housing and increase costs for borrowing, liquidating assets, and delaying required payments or bills. **This brief focuses on the following questions: How has income volatility changed over time? Which families face the most variation in their incomes? What are the drivers of volatility?**

Not all income volatility represents a threat to a household's well-being. A teacher, for instance, earning her annual salary in just nine months, has widely fluctuating income over a year, but can predict these changes and use consumption smoothing behavior, like savings. Likewise, negative shocks to income do not necessarily translate into hardship if individuals can find ways to smooth consumption by borrowing. If households have access to consumption-smoothing tools, such as savings, credit, or the chance to liquidate assets, income volatility may not significantly impact consumption.

However, low-income households often do not have cost-effective access to these tools, and thus volatility may have a more destabilizing impact than on higher income households.<sup>2</sup> Low-income households may face a reduced ability to borrow, a low capacity to save, and liquidity constraints. In addition, households might be forced to limit medical care, transportation, or other crucial services, or to turn to high-cost alternative financial services. We will explore the patterns of consumption behavior and debt use for low-income households with volatile incomes in future briefing papers.

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<sup>1</sup> Autor, Katz, and Kearney, 2008; See also: Bound & Johnson, 1992; Katz & Murphy, 1992; Murphy & Welch, 1992; Juhn, Murphy, & Pierce, 1993

<sup>2</sup> For previous research by Klawitter and Morgan-Cross on low-income households' use of financial services and borrowing costs see: *Assets, Credit Use and Debt of Low-Income Households* (2012) and *Alternative Financial Services Use Across Income, Race, and Ethnic Groups* (2011).

## Rising Income Volatility over Time

**Family income volatility has increased over the last three to four decades, although individual earning volatility has shown less remarkable increases.** There are many models for isolating volatility in income from more permanent changes in income, and existing research incorporates a variety of measures of volatility to evaluate the ways in which income volatility has changed over time.<sup>3</sup>

Most findings point to general increases in the volatility of men's earnings and family income between the 1970s and the 2000s.<sup>4</sup> Measured by how much family income changed per year, compared to the family's seven-year average, family income volatility has increased by 25 to 50 percent across all levels of income, age, and education from 1970 to 2004.<sup>5</sup> Much of this increase took place from the late 1980s to early 1990s and was driven by increases in volatility for those already with the most volatile incomes (75<sup>th</sup> percentile of volatility). The volatility of median households and volatility of those in the 25<sup>th</sup> percentile of volatility slightly increased and remained constant, respectively. .

Some research has also shown that individual earnings volatility also increased over this period. Isolating the earnings of white males from 1974 to 2000, there were significant increases (28 to 39 percent of income) in volatility, particularly from the mid-1970s to mid-1980s and during the late 1990s.<sup>6</sup> Volatility in women's earnings showed smaller increases during the time period than that of men,<sup>7</sup> and other research has shown little increase in volatility in individual earnings over this period.<sup>8</sup>

## Higher and Rising Income Volatility for Low-Income Households

**Family income volatility for low-income households is higher—and has increased more rapidly—than for higher income families.** While the income volatility of households with greater income rose, the volatility of low-income families increased at a significantly higher rate, particularly from 1985 to 1995.<sup>9</sup>

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<sup>3</sup> Measurements for volatility (including variance, standard deviation, and coefficient of variance) calculate the short-term changes in income compared to a mean or predicted longer term income of the individual. A variety of time periods are also used to distinguish permanent from transitory, or short-term income changes, including month-to-month income variation and yearly changes over long-term averages. Unless otherwise noted, the research discussed here uses longitudinal data from the Survey of Income and Program Participation and the Panel Survey of Income Dynamics. All of the research used in this brief was completed with data gathered before the 2008 economic recession.

<sup>4</sup> Gosselin, Peter and Zimmerman, Seth. *Trends in Income Volatility and Risk, 1970-2004*. The Urban Institute, 2008; Nichols, Austin and Zimmerman, Seth. *Measuring Trends in Income Variability*. The Urban Institute, 2008; Gottschalk, Peter and Moffitt, Robert. *The Rising Instability of U.S. Earnings*, 2009; Dynan, Karen; Elmendorf, Douglas; and Sichel, Daniel. *The Evolution of Household Income Volatility*. The Brookings Institution, 2007.

<sup>5</sup> Gosselin and Zimmerman (2004).

<sup>6</sup> Gottschalk and Moffitt (2009).

<sup>7</sup> Ibid.

<sup>8</sup> Nichols and Zimmerman (2008).

<sup>9</sup> Mills, Gregory and Amick, Joe. *Can Savings Help Overcome Income Instability*. The Urban Institute, 2010; Gosselin and Zimmerman. *Trends in Income Volatility...2008*.

Volatility in the individual earnings of low-income men was also significantly higher in the 1970s and increased faster, particularly from 1970 to 1990, than for men with higher earnings.<sup>10</sup>

**Income varies more month-to-month in lower income households than for households in higher income brackets**, although this volatility levels off above 185% of the income-to-poverty ratio.<sup>11</sup>

**Low-income households are more likely to experience a large drop in income over the course of a year.** Over 20% of low-income households with children experienced a drop of more than half of the household's income over the course of a year, significantly more than higher income families with children.<sup>12</sup> Interestingly, the highest income families have the second highest likelihood of experiencing income drops. Among those with large income drops, families in the lowest quintile of income were most likely to recover within a year (51% compared to 37% for all households), signifying substantial volatility.

### Drivers of Income Volatility for Low-Income Households

Better understanding the causes of income volatility for low-income households can aid in designing programs or policies to alleviate the negative impacts on family well-being. Unemployment, fluctuating work hours or weeks, significant wage changes, health problems, or disability could all influence income volatility, and each requires a tailored policy or programmatic solution.

There is little empirical research that explores the direct causes of persistent volatility for low-income households. However, a growing body of research explores the causes for large income drops for low-income households. These income changes do not necessarily represent volatility per se (but rather could be permanent income changes); however, they shed light on the factors that influence significant changes in income for low-income households.

**Similar to volatility, the likelihood of experiencing a large drop in income (25 to 50 percent of income) has increased significantly over time**, even while the likelihood of experiencing one of seven events<sup>13</sup> expected to destabilize income has decreased.<sup>14</sup> While families in the lowest income quintile were significantly more likely to experience a drop in income than average, it was the highest income families that were most likely to experience such a drop.<sup>15</sup>

**The effects of destabilizing events on income have increased over time:** Since 1974, households have become more likely to experience a drop in income when a destabilizing event occurs (Figure 1).

<sup>10</sup> Gottschalk and Moffitt (2009).

<sup>11</sup> Newman, Constance. *The Income Volatility See Saw*. USDA Economic Research Service, 2006.

<sup>12</sup> Acs, Gregory; Loprest, Pamela; and Nichols, Austin. *Risk and Recovery: Understanding the Changing Risks to Family Incomes*. The Urban Institute, 2009.

<sup>13</sup> The seven events include divorce, death of a spouse, birth of a child, the loss of work due to retirement or disability, major unemployment of the household head, loss of work due to illness, and a decline in the wife's work hours.

<sup>14</sup> Gosselin and Zimmerman (2008).

<sup>15</sup> Acs, Gregory and Nichols, Austin. *Changes in the Economic Security of American Families*. Low-Income Working Families Series. The Urban Institute, 2010.

Changes to employment status (loss of a job or reduction in hours) and the number of working adults in a household have the largest effect on large income changes.

**Figure 1. Percentage of families losing 50% of income after experiencing destabilizing event**

Year	Unemployment of head	Work loss due to illness	Fall in wife's work hours	Any of seven destabilizing events
1974-1983	17.3%	14.9%	8.5%	14.3%
1984-1993	21.8%	16.4%	9.3%	16.9%
1994-2003	25.5%	19.3%	12.2%	20.2%

Source: Gosselin and Zimmerman (2008).

The reason for an income drop influences ability to recover. Families whose income dropped because of a job loss, an adult leaving the family, or who incurred a severe disability or loss of a child after the income drop, were less likely to recovery within a year.<sup>16</sup>

**Employment changes and the loss of working adults in the family were the most likely events to occur immediately prior to a family with children entering poverty<sup>17</sup> or to becoming eligible for the free school lunch program** (to have income 185 percent of poverty level).<sup>18</sup> Changes in employment are much more common than losing a working adult from a household, so employment changes drive many of the large income changes experienced by low-income households.<sup>19</sup>

Macro-level events, such as policy changes and unemployment rates did not appear to have a large impact on the likelihood of entering poverty.<sup>20</sup> However, after national welfare reform in the 1990s, unemployment changes became more influential, and changes to family structure less influential, to a family's likelihood of entering poverty.<sup>21</sup>

In sum, persistent income volatility or income drops may cause hardship for families as they try to maintain basic expenditures for food, transportation, and housing, and face the associated costs of borrowing, liquidating assets, or delaying payments. Low-income households experience more income volatility than do higher income families and this gap has grown over time. This volatility appears to be driven largely by changes to employment (wages and hours) and family composition (share of working adults). Understanding how low-income families respond to income volatility—what savings, borrowing, or asset-liquidating behavior allows consumption smoothing—has important implications to economic security and well-being. These questions will be examined in future briefs.

<sup>16</sup> Acs, Loprest, Nichols (2009).

<sup>17</sup> McKernan, Signe-Mary and Ratcliffe, Caroline. *Transition Events in the Dynamics of Poverty*. The Urban Institute, 2002.

<sup>18</sup> Newman, Constance (2006).

<sup>19</sup> These studies examined only families crossing these income thresholds, so the changes may not indicate large income changes or persistent volatility. However, the same factors also play important roles in poverty exits, along with educational attainment (receiving an advanced degree or certificate).

<sup>20</sup> These studies did not explore local economic conditions that may have a greater impact on income volatility than national conditions.

<sup>21</sup> McKernan, Signe-Mary and Ratcliffe, Caroline. *Events that Trigger Poverty Entries and Exits*. Social Science Quarterly. Supplement to Volume 86, 2005.