Fund Flows During COVID-19

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Chief Economist
Investment Company Institute
Overview

» Importance of funds to households and financial markets
» COVID-19: Massive real shock that impaired financial markets
» Government acted to restore flow of credit
» Fund flows reflected market conditions
» Conclusions
Importance of Funds to Households and Financial Markets
## Funds Are a Key Savings Vehicle for Households

<table>
<thead>
<tr>
<th>Assets in registered investment companies</th>
<th>Share of household financial assets held in funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>$23 trillion</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Americans owning mutual funds</th>
<th>Proportion citing retirement saving as primary financial goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>102 million</td>
<td>73%</td>
</tr>
</tbody>
</table>
Fund Assets Are Spread Across Markets

Percentage of assets, March 2020

- **Domestic equity funds**: $8.6 trillion (38%)
- **World equity funds**: $2.9 trillion (13%)
- **Bond funds**: $5.2 trillion (23%)
- **Money market funds**: $4.3 trillion (19%)
- **Hybrid**: $1.4 trillion (6%)

*This category includes ETFs—both registered and not registered under the Investment Company Act of 1940—that invest primarily in commodities, currencies, and futures.

Source: Investment Company Institute

**US mutual fund and ETF total net assets**: $22.5 trillion
Funds Channel Households’ Savings to Companies, Federal Government, and Municipalities

Percentage of total market securities held by registered investment companies, 2019

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Mutual funds</th>
<th>Other RICs</th>
<th>Other investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>US equity</td>
<td>68</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate bonds*</td>
<td>79</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treasuries &amp; agencies</td>
<td>86</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muni securities</td>
<td>71</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>25</td>
<td></td>
<td></td>
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<tr>
<td>Commercial paper</td>
<td>75</td>
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<tr>
<td></td>
<td>25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Includes US and foreign corporate bonds, as reported by Federal Reserve Board
Sources: Investment Company Institute, Federal Reserve Board, and World Federation of Exchanges
COVID-19: Massive Real Shock that Impaired Financial Markets
COVID-19: A Massive Shock to Real Economy

Percentage change in real US GDP, quarterly, seasonally adjusted annual rate

* Note: 2020:Q2 is a Bloomberg forecast as of May 19, 2020.
Spread of Coronavirus and Effect on Markets

Thousands of coronavirus cases (left axis); level of S&P 500 (right axis)

- Worldwide coronavirus cases (left scale)
- S&P 500 (right scale)
Volatility Surpassed Levels Seen in 2008

Level of VIX, daily

Source: Cboe Exchange, Inc.
Yields on Long-Term Corporate Debt Jumped

Yields on high-yield and BBB-rated bonds, percentage, daily

Source: Federal Reserve FRED

May 27, 2020
And Short-Term Credit Markets Were Stressed

Yields on 3-month commercial paper and SIFMA municipal swap index, percentage, daily

Source: Federal Reserve Board; SIFMA
Federal Government Acted to Protect Economy

» Federal Reserve
  » Cut rates, purchased gov’t securities, boosted swap lines
  » Lending facilities: MMLF, CPFF, PDCF, PMCCF, SMCCF, TALF, PPPLF, MLF, Main Street Lending

» Congress
  » CARES Act – provided capital for Treasury to backstop Fed facilities

» SEC
  » Supported open and orderly equity markets
  » Provided exemptive relief for funds
Fund Flows Reflected Market Conditions
Investors Sought Liquidity in Government MMFs

Change in money market fund assets, billions of dollars, weekly

*Government includes “Treasury” and “Government” funds from Crane Data.
Sources: Investment Company Institute and Crane Data

Fund Flows During COVID-19

May 27, 2020
Money Market Funds: 2020 vs 2008

Changes in assets, billions of dollars

- Tax-exempt
- Prime
- Government

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
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</thead>
<tbody>
<tr>
<td>2020</td>
<td>-18</td>
<td>33</td>
<td>691</td>
<td>836</td>
<td>397</td>
<td>46</td>
<td>83</td>
<td>169</td>
</tr>
<tr>
<td>2008</td>
<td>-139</td>
<td>342</td>
<td>342</td>
<td>397</td>
<td>348</td>
<td>169</td>
<td>151</td>
<td>151</td>
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</table>

Source: Investment Company Institute

Asset levels reported on Fed’s balance sheet; billions of dollars, weekly Wednesday

Source: Federal Reserve Board
Flows to Bond Mutual Funds

Billions of dollars, weekly

<table>
<thead>
<tr>
<th>Dates</th>
<th>8</th>
<th>15</th>
<th>22</th>
<th>29</th>
<th>5</th>
<th>12</th>
<th>19</th>
<th>26</th>
<th>4</th>
<th>11</th>
<th>18</th>
<th>25</th>
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<th>8</th>
<th>15</th>
<th>22</th>
<th>29</th>
<th>6</th>
<th>13*</th>
<th>15*</th>
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<td>January</td>
<td>8</td>
<td>15</td>
<td>22</td>
<td>29</td>
<td>5</td>
<td>12</td>
<td>19</td>
<td>26</td>
<td>4</td>
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<td>18</td>
<td>25</td>
<td>1</td>
<td>8</td>
<td>15</td>
<td>22</td>
<td>29</td>
<td>6</td>
<td>13*</td>
<td>15*</td>
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<tr>
<td>February</td>
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<td>15</td>
<td>22</td>
<td>29</td>
<td>5</td>
<td>12</td>
<td>19</td>
<td>26</td>
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<td>11</td>
<td>18</td>
<td>25</td>
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<td>8</td>
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<td>22</td>
<td>29</td>
<td>6</td>
<td>13*</td>
<td>15*</td>
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<td>March</td>
<td>8</td>
<td>15</td>
<td>22</td>
<td>29</td>
<td>5</td>
<td>12</td>
<td>19</td>
<td>26</td>
<td>4</td>
<td>11</td>
<td>18</td>
<td>25</td>
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<td>8</td>
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<td>22</td>
<td>29</td>
<td>6</td>
<td>13*</td>
<td>15*</td>
</tr>
<tr>
<td>April</td>
<td>8</td>
<td>15</td>
<td>22</td>
<td>29</td>
<td>5</td>
<td>12</td>
<td>19</td>
<td>26</td>
<td>4</td>
<td>11</td>
<td>18</td>
<td>25</td>
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<td>29</td>
<td>6</td>
<td>13*</td>
<td>15*</td>
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<tr>
<td>May</td>
<td>8</td>
<td>15</td>
<td>22</td>
<td>29</td>
<td>5</td>
<td>12</td>
<td>19</td>
<td>26</td>
<td>4</td>
<td>11</td>
<td>18</td>
<td>25</td>
<td>1</td>
<td>8</td>
<td>15</td>
<td>22</td>
<td>29</td>
<td>6</td>
<td>13*</td>
<td>15*</td>
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</tbody>
</table>

Memo: percent of previous month assets

0.43% 0.23% 0.28% 0.26% 0.17% 0.22% 0.23% 0.04% -0.49% -0.66% -1.90% -1.85% -0.77% -0.27% -0.03% 0.10% 0.05% 0.23% 0.19% 0.06%

*Data for May 13 and 15 are estimated from Morningstar daily data.
Sources: Investment Company Institute and Morningstar
Flows to Bond Mutual Funds: 2020 vs 2008

Percent of assets

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Invest. grade</th>
<th>High yield*</th>
<th>Govt</th>
<th>Multisector</th>
<th>Global</th>
<th>Municipal</th>
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<tbody>
<tr>
<td>Mar 2020</td>
<td>-5.2</td>
<td>-3.9</td>
<td>-4.3</td>
<td>-4.5</td>
<td>-4.9</td>
<td>-8.1</td>
<td>-7.9</td>
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<tr>
<td>Oct 2008</td>
<td>2.4</td>
<td>-2.4</td>
<td>-3.0</td>
<td>-0.9</td>
<td>-4.5</td>
<td>-5.5</td>
<td>-2.3</td>
</tr>
</tbody>
</table>

*Data exclude high-yield funds designated as floating rate funds.
Sources: Investment Company Institute
Coronavirus and Municipal Sector

Net flows to municipal bond funds, billions of dollars, weekly, Jan 8, 2020–Apr 27, 2020

<table>
<thead>
<tr>
<th></th>
<th>Jan 8</th>
<th>Jan 15</th>
<th>Jan 22</th>
<th>Jan 29</th>
<th>Feb 5</th>
<th>Feb 12</th>
<th>Feb 19</th>
<th>Feb 26</th>
<th>Mar 4</th>
<th>Mar 11</th>
<th>Mar 18</th>
<th>Mar 25</th>
<th>Apr 1</th>
<th>Apr 8</th>
<th>Apr 15</th>
<th>Apr 22</th>
<th>Apr 29</th>
<th>May 6</th>
<th>May 13</th>
<th>May 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5</td>
<td>3.3</td>
<td>3.1</td>
<td>3.2</td>
<td>3.0</td>
<td>3.3</td>
<td>2.6</td>
<td>3.0</td>
<td>-0.5</td>
<td>-3.1</td>
<td>-1.4</td>
<td>-2.9</td>
<td>1.3</td>
<td>0.6</td>
<td>0.4</td>
<td>0.5</td>
<td>0.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Memo: percent of previous month assets
0.41% 0.38% 0.36% 0.37% 0.34% 0.30% 0.34% -0.06% -0.34% -2.23% -2.20% -0.18% -0.35% 0.16% 0.07% -0.21% 0.05% 0.06% 0.04%

Note: Includes mutual funds and ETFs; municipal bond mutual fund data from May 13 and 15 are estimated from Morningstar daily data, and municipal bond ETF data from May 13 and 15 are estimated from Bloomberg daily data.
Sources: Investment Company Institute, Morningstar Direct, and Bloomberg
‘Dark Matter’: Funds Aren’t the Only Investors in the Universe

*Funds’ share of trading volumes in selected types of fixed income securities, March 2020*

<table>
<thead>
<tr>
<th>Security Type</th>
<th>Purchases</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment Grade Corp.</td>
<td>32.4</td>
<td>31.2</td>
</tr>
<tr>
<td>Government</td>
<td>3.4</td>
<td>2.8</td>
</tr>
<tr>
<td>Municipal</td>
<td>18.0</td>
<td>10.4</td>
</tr>
<tr>
<td>High-Yield</td>
<td>5.0</td>
<td></td>
</tr>
</tbody>
</table>

* Calculated as (gross fund purchases / (1/2 trading volume on relevant market))
† Calculated as (gross fund sales / (1/2 trading volume on relevant market)

Sources: Investment Company Institute, FINRA TRACE

May 27, 2020
High Yield Bond Mutual Funds

Net flows as a percentage of assets; monthly, January 2006–March 2020

Note: Data exclude high-yield funds designated as floating rate funds.
Source: Investment Company Institute

10% of high-yield funds saw inflows greater than this

Fund Flows During COVID-19

May 27, 2020
Fund Flows and Changes in Assets: Not the Same

Net flows and changes in assets of bank loan funds (percent of previous month’s assets)

Note: Includes assets in mutual funds and ETFs.
Source: Investment Company Institute
Target Date Funds Can Provide Some Counterbalance to Financial Markets

Hypothetical example for March 19, 2020

<table>
<thead>
<tr>
<th>Target allocation</th>
<th>Total return</th>
<th>Allocation outcome</th>
<th>Likely action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic equity(^1)</td>
<td>50.0%</td>
<td>+1.1%</td>
<td>50.3%</td>
</tr>
<tr>
<td>International equity(^2)</td>
<td>20.0%</td>
<td>-0.2%</td>
<td>19.9%</td>
</tr>
<tr>
<td>Government bond(^3)</td>
<td>15.0%</td>
<td>+1.2%</td>
<td>15.1%</td>
</tr>
<tr>
<td>Corporate bond(^4)</td>
<td>15.0%</td>
<td>-1.7%</td>
<td>14.7%</td>
</tr>
</tbody>
</table>

3. Total return on the ICE BofA US Treasury & Agency Index for March 19, 2020
4. Total return on the ICE BofA US Corporate Index for March 19, 2020

Source: Investment Company Institute and Bloomberg
Flows to Equity Mutual Funds and ETFs

Billions of dollars, weekly

Memo: percent of previous month assets

-0.09% -0.01% 0.02% -0.06% 0.09% 0.05% 0.00% -0.09% -0.15% 0.12% -0.08% -0.30% 0.11% 0.06% 0.04% -0.08% -0.17% -0.19% -0.04% -0.05%

*Equity mutual fund data for May 13 and 15 are estimated from Morningstar daily data, and equity ETF data from May 13 and 15 are estimated from Bloomberg daily data.

Sources: Investment Company Institute, Morningstar, and Bloomberg
Flows to Equity Funds: 2020 vs 2008

*Estimated from weekly data through April 22.

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr*</th>
<th></th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>16.6</td>
<td>10.4</td>
<td>-7.7</td>
<td></td>
<td>1.7</td>
<td>2.7</td>
<td>14.3</td>
<td>-39.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Domestic</td>
<td>-24.5</td>
<td>-28.2</td>
<td>-18.1</td>
<td></td>
<td>-14.2</td>
<td>8.9</td>
<td>-18.3</td>
<td>-4.0</td>
<td>5.5</td>
</tr>
</tbody>
</table>

*Estimated from weekly data through April 22.
ETF Trading Volumes Rose

ETF trading volume as percent of stock market trading volume; daily

Sources: Investment Company Institute tabulations of Bloomberg and Cboe Exchange, Inc. data
ETFs Provided Price Discovery
*Median premium (+)/discount (-), basis points*

Source: Bloomberg
Conclusions

» What worked well:
  » Equity markets (including equity mutual funds and ETFs) traded freely
  » Funds’ BCP worked, supported investors despite remote work
  » Government’s response to financial markets was strong, effective

» Areas for fact-gathering:
  » Functioning of money and bond markets
  » Size and role of all participants in fixed income markets
  » Interaction among all market participants and its impact on markets
    » Broker/dealer balance sheet capacity
Thank you