

Response to discussion slides by Sean Collins from ICI on “Investor Flows and Fragility in Corporate Bond Funds”

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1. Slide 2 (Paper’s Hypotheses):

These are not our hypotheses. Our hypotheses are clearly stated in the paper and in the presentation slides. Our hypotheses all have to do with the illiquidity of the holdings of the funds and the market at large, and thus our tests emphasize the difference across funds and over time in the sensitivity of outflow to performance depending on the level of liquidity. The discussion sidesteps the core of our hypotheses with the informal story provided on this slide.

2. Slides 5-6 (High-Yield Funds in Dec 2015)

While the results on select funds, e.g., high yield funds, during select periods, e.g., December 2015, may be interesting, we are really not sure what we are supposed to make of this example and how it is related to our hypotheses. First, information from a very small sample can lead to misleading conclusions. Second, it’s not clear whether the high yield funds in the sample are particularly liquid or illiquid and what illiquidity they faced in the market (e.g., how much cash and other liquid assets they hold? How illiquid is the corporate bond market in this period?), and therefore this example has no clear implications for our liquidity-based hypotheses. Third, the picture drawn from the episode in December 2015 is clearly incomplete – most of the funds in the sample have negative returns in that month. Should one compare that with a period when most of the funds have positive returns? While this example seems to support our main story, in our paper we emphasize analysis based on large samples with proper statistical tests.

3. Slides 7-8 (Aggregate Flows in High-Yield Funds 2008-2016)

The discussion shifts here to aggregate flow-performance analysis. It should be stressed that the focus of our paper is not on the aggregate relation but the fund-level relation, and this is where we form and test all our hypotheses. We present evidence towards the end of the paper (Section 5) to suggest that it seems there is something going on also at the aggregate level, but this is by no means the focus of our paper. We do not put much weight on aggregate-flow analysis and do not find criticism against it to be critical for the paper.

Moreover, thinking about the analysis in these slides, we find it very hard to see why this analysis would be preferred over the one we provide in Section 5. We provide analysis over a longer sample for a bigger set of funds. Why focus on the 2008 onwards period? Over this period, there are substantial inflows to corporate bond funds as investors shift money to them

at the expense of other investment vehicles. Is this sample period representative? We think it is not. Also, why focus on the high-yield bonds, recall that our hypotheses deal with illiquidity, and high-yield does not automatically mean illiquid. If one wants to focus on subsamples where our story is more likely to hold then one should focus on measures of fund illiquidity and illiquid times. Finally, note that fund flows tend to be persistent. Simple plot of the flow and returns do not accurately capture the reaction of aggregate flows to past performance. We take care of this in our paper.

4. Slides 10-12 (Bond Mutual Fund Investors Redeem Only Moderately)

Our paper does not imply in any way that mutual fund investors redeem massively following bad shocks. It is true that they have not redeemed very massively in the past. The crux of our paper is to identify the underlying mechanism that illiquidity amplifies the sensitivity of redemptions to bad shocks. We think the presence of this mechanism suggests a first-mover advantage, which would amplify flows in case all of a sudden there are massive flows. This is something market participants and regulators should be aware of and perhaps do something about. We need to design the system to be more resilient ahead of the big bad shock and not after that. Alleviating the first-mover advantage can make the system more resilient when a big bad shock happens.

A couple more points: First, the fact that investors have not been redeeming massively in the past does not say they will not do so in the future. As we saw in other contexts, e.g., money-market funds, vehicles that appear very safe and stable can all of a sudden change. We need to understand their structure ahead of time and this is the goal of this paper. Second, the fact that much of holding in mutual funds is coming from retail investors and retirement funds is again no assurance of stability. There is nothing that prevents these investors from withdrawing if they think their money is not safe. In fact, retirement funds may be the easiest to shift around, since investors can just electronically shift them from one fund to another.

5. Slides 14-15 (Fund Flows and Bond Prices)

Again, we are not attempting to estimate the effect of flows on market prices. There is vast research in the context of equity mutual funds that shows strong evidence on the effect of flows on market prices. We are motivated by this evidence. It would be surprising if this evidence does not exist in the context of corporate-bond funds, especially given that these markets are so much more illiquid and have large price impacts, but verifying this evidence is left for future research. Still, we are puzzled by the logic and numbers presented on these slides.

Concerning slide 14 and the numbers for the percentage of holding of mutual funds in corporate bond markets: we will start by saying that we do not find this dimension to be important for the overall story and analysis. Even if mutual funds hold 5-10% of the market, they can still have price impact, which is consistent with the broad evidence in this market about the fact that trades are infrequent and lead to price impact. Moreover, we are not sure about the source for the numbers presented. In our paper, we wrote, "Combining data from ICI (\$1.72 trillion holdings of corporate bonds by bond funds) and SIFMA (\$7.46 trillion corporate bonds outstanding), we estimate that corporate bond funds owned about 23% of corporate bonds outstanding in 2013." The source of the ICI data can be found in 2014 ICI factbook, Table 29 "portfolio holdings of long-term mutual funds," which states that in 2013, long-term mutual funds hold \$1.72 trillion of corporate bonds. In the discussion page 14, in 2013 corporate bond funds own \$681 billion of corporate bonds. Why is there a trillion dollar discrepancy? Moreover, the discussion says that in 2015, corporate bond funds own only 9.3% of US corporate bonds. But in 2015 ICI factbook reports in figure 1.6 that mutual funds own 17% of US and international corporate bonds. Why is there such difference?

Unfortunately, slide 15 is completely off and misrepresents numbers from our paper. The discussion slides note: "8.79% monthly outflow (3 times bigger than any month since January 2000)." However, 8.79% is the standard deviation of flows of individual bond funds and has happened many times in our sample. In fact, 1% of the observations in our sample see monthly outflows greater than 23.83%. We never use that number for aggregate bond funds. For aggregate analyses, we always state the impact of 1% outflows.

The VAR analysis referred to in this slide and contained in the appendix slides is also completely off. We of course acknowledge that VAR analyses have problems in pinning down causality. We never implied anything else in the paper. This is a side result of the paper that contains some information, but has to be viewed with the usual caveat that people are aware of when looking at VAR analyses. We are not attempting to resolve existing differences of opinions in the literature on the ability to make inferences from this type of analysis. Still, the way the analysis is conducted in the slides is misrepresenting what we did. First, we did not use the raw yield spread in our VAR analysis, but focus on the Excess Bond Premium, which is orthogonal to default risk (this helps to solve the so-called chicken-egg problem, because fundamental effects for bond investors are most likely due to default risk, whereas we focus on the credit risk premium, possibly due to other channels such as mispricing). Second, in terms of magnitudes, on Page 23, the impulse response function seems to indicate a rise of yield spreads by 30 to 40 bps in the subsequent two quarters following investor redemptions. We view this number as extremely large, because for a bond with a duration of 10, it implies close to 3 to 4 percent decline in the subsequent two quarters.