Did Banks Pay "Fair" Returns to Taxpayers on TARP?

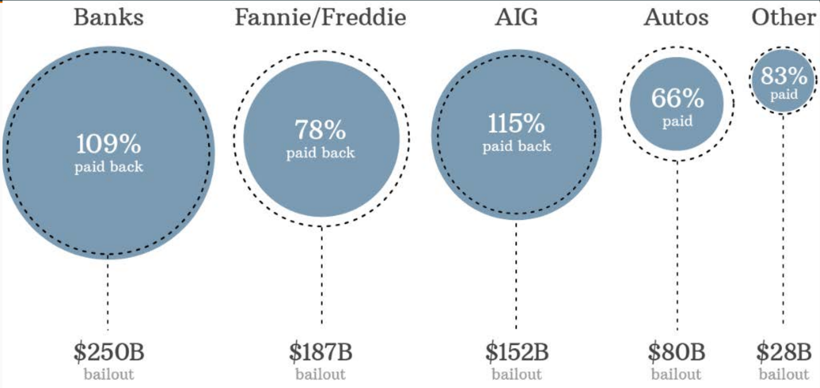
by Flanagan & Purnanandam

Juliane Begenau

WFA Meeting 2021

Stanford GSB & NBER & CEPR

CNN: Banks $22.3 billion profit (Sep 2013)



The Trouble Asset Relief Program, which was the most publicized and controversial part of the bailouts, was created to help the faltering U.S. bank system. Treasury used it to pump $250 billion into banks both large and small in order to shore up their capital, and to keep them lending money to consumers and businesses. In return, Treasury got stock and warrants in the banks, which it later sold at a profit.

Many think that taxpayer turned a profit

COMMUNITY BANKING

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BankThink Tarp was not a bailout, and the government's profit was huge

By Edward Yingling May 16, 2017, 9:30 a.m. EDT 3 Min Read

Last week, the Treasury Department announced that the final major investment in a bank
Asset Relief Program had been repaid and that the government had made a total profit of $30.7 billion on the
program. Of course, this story did not appear in any of the major media, and 99% of the media and the public
probably still believe the government lost hundreds of billions of dollars on “bailed out” banks.

This paper: Did banks pay a fair return on TARP capital?

- Premise: Treasury injected capital into banks and other institutions in return for preferred equity and warrants

Research approach:

- *Make cash flows comparable across time and risk*

Two methods: IRR vs standard valuation approach

1. TARP Value (NPV) $= 0 = \frac{C_1}{(1+IRR)^1} + ... + \frac{C_N}{(1+IRR)^N}$

   Compare resulting IRR to benchmark return
2. TARP Value (NPV) $= \frac{C_1}{(1+r_1)^1} + ... + \frac{C_N}{(1+r_N)^N}$

   r_t is benchmark return
   They call that PME (Public Market Equivalent)
   bit narrow - standard valuation tool (taught in MBA courses)

Results

- Various forms of benchmarks (i.e. risk-adjustments)
  - Same bank nonTARP preferred equity
  - Same bank senior debt
  - S&P 500 preferred stock index
  - Preferred equity plus warrants
  - ...
- Warrant repurchase at advantaged pricing
- TARP repayments and subsequent shareholder and CEO payouts

Discussion

Common mistake

Simple cash flow comparisons without risk-adjustment

- This paper great application of fundamental lesson in finance

  Need to make cash flows comparable across time and risk

- Authors argue clearly & convincingly that
  banks got a good deal on TARP

Comments:

- Method of benchmarking bank performance
- Bank equity return performance since the crisis

On the usefulness to compare banks against benchmark

- Banks tend to be opaque (invest in illiquid, untraded stuff)

  $\Rightarrow$ To figure out what they do, helpful to benchmark
- Disciplining to ask:

  What is the minimum required return for x?
- Wide application for questions such as:
  - How much market power do banks have in loans and deposits?
  - Are there synergies b/w assets and liabilities?
  - Are shareholders getting a good deal?

Preferred equity relative to banks' common stocks?

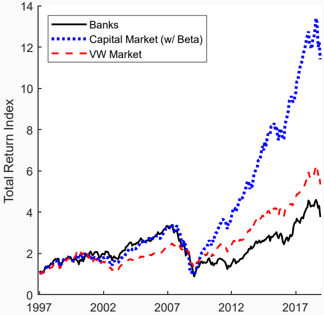
- Narrative in this paper:

  Banks got a good deal on preferred equity

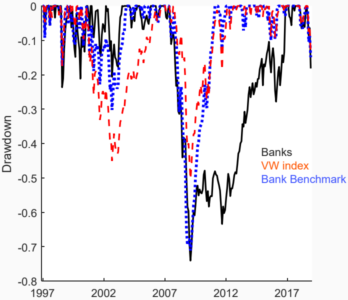
- Overall, low bank stock performance since the financial crisis

  (investment timing might be very important here)

Bank Valuation against Benchmark Return



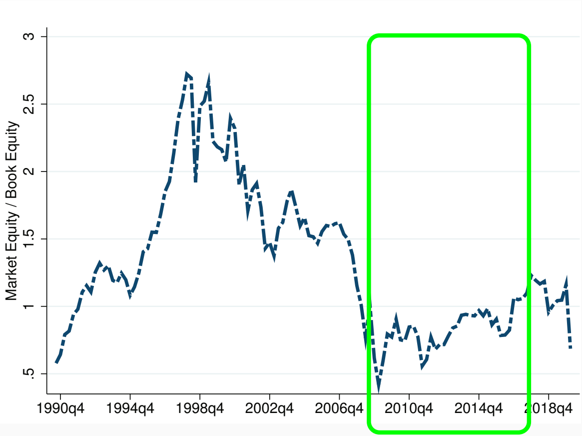
(a) Bank equity return performance vs. benchmark



(b) Drawdowns, banks took especially long to recover

- Benchmark based on banks' interest rate, credit, and market risk (Begenau & Stafford 2020)
- Banks underperformed that benchmark since the financial crisis

Bank Valuation Tanked for a Decade after the Crisis



- Since crisis lower gov. guarantees, more competition, questionable value of deposit franchise during near zero rate environment
- Perhaps shareholders got a good deal on TARP but a bad deal on banks

Smaller points

- This draft is close to be ready for submission (just a few edits, intro in particular could be a bit clearer i.e. clarify different TARP return numbers)
- Wilson, L., 2009. Valuing the first negotiated repurchase of the TARP warrants.
  - Case study of Old National Bancorp shows that this bank's warrants were underpriced by the Treasury
- Unclear: page 15 "following standard methodology, all bank variables are aggregated to the highest bank holding company level" - if you use FR-9-YC data, variables are at the bank holding
- Abnormal positive return in response to early repayment might be related to potentially positive signaling effect
- Table 2: Would add row % TARP / Total Equity, also as explanatory variable
- Wells Fargo example in the appendix points to large differences in subsidy based on using same bank's vs. SP500 preferred equity return. Is this more general? If yes, what explains that difference?
- At many points in the paper you advertise XS diff - but see little of that in the paper
- The PME analogy is misleading. You are using a standard finance valuation approach. Unlike it's use in the private equity literature (with the exception of Korteweg and Nagel and Gupta and Van Nieuwerburgh), PME applications generally assume a beta of 1 between the market and the investment to be valued. You are also doing this but for a much better reason, as the risk of preferred equity issued to the market is likely highly similar to the risk of preferred equity via TARP
- You could add more detail to the benchmark calculations with equations and data example. You want your results to be easily replicatable. Maybe consider posting dataset, code, and or algorithm summary on website to reach popular media too.

Conclusion

- Great paper with important policy implication
- Highlights the usefulness of a benchmark exercise
- Lots of interesting implications for future projects (welfare analysis of TARP, design of bailout policies, ...)