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# Strategic Claim Payment Delays: Evidence from Property and Casualty Insurance

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Satellite images of wildfires burning in Southern California in January 2025



Sam Strgacich and Rossana Valverde at their Pasadena home, waiting on a smoke damage settlement from State Farm.

# Claim payment timing is a financial management tool

- Insurers collect premiums upfront and pay claims only later, if risks materialize
- Insurers delay payments when facing financial constraints
- The paper unveils new and alternative response to well-documented premium adjustments, asset allocation, etc.

# Institutional Background

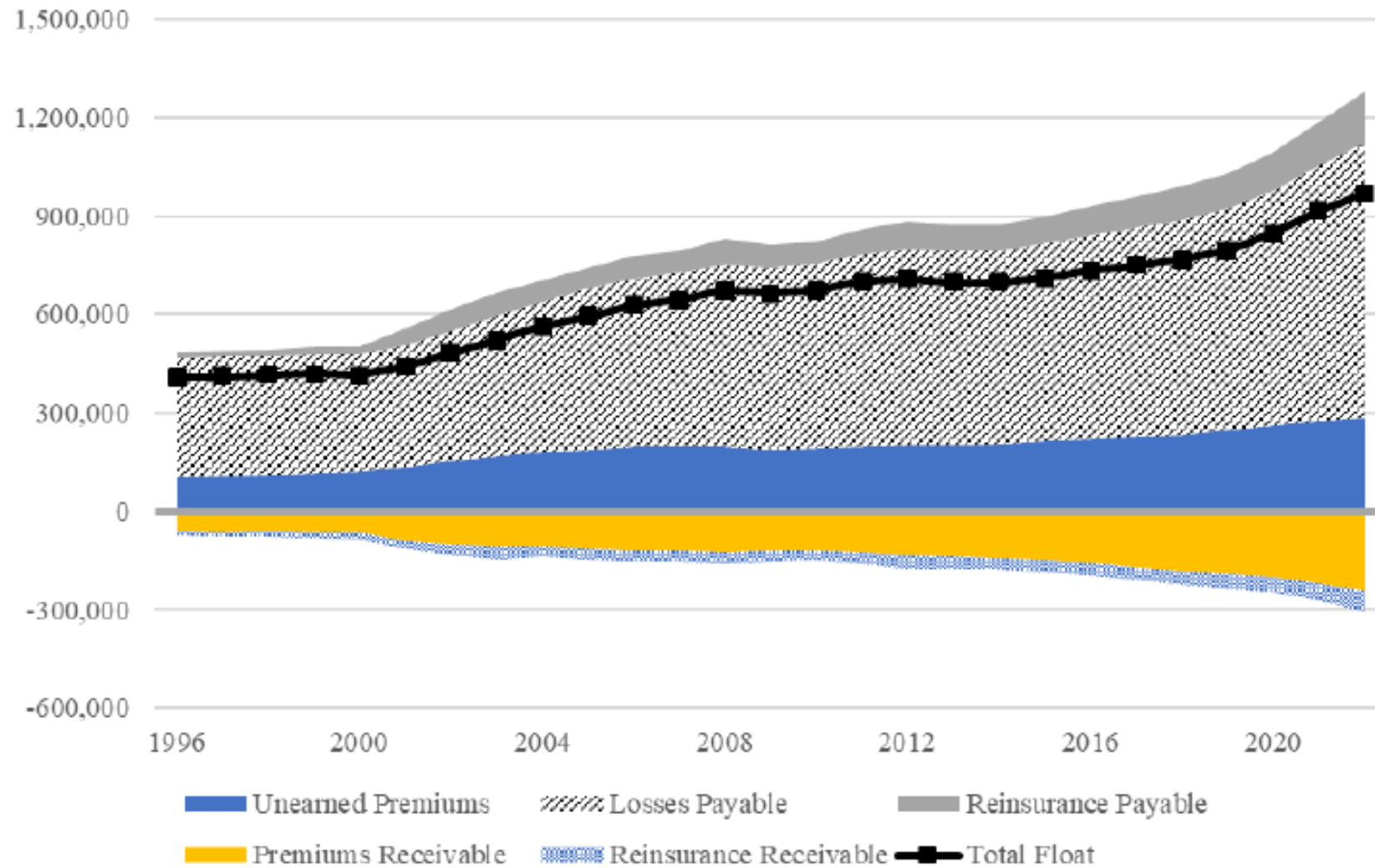
Property/casualty insurer balance sheet structure  
and dynamics

## Balance sheet of a property/casualty (P&C) insurance company

| <b>Assets</b>                       | <b>Liabilities</b>           |
|-------------------------------------|------------------------------|
| Cash                                | Loss Reserves                |
| Investments                         | <i>Unpaid Claims (+)</i>     |
| <i>Premium Receivables (-)</i>      | <i>Unearned Premiums (+)</i> |
| <i>Reinsurance Recoverables (-)</i> | Other Liabilities            |
| <i>Agent's Balances (-)</i>         |                              |
| Other Assets                        |                              |
| <b>Total Assets</b>                 | <b>Total Liabilities</b>     |

- **Float** is the difference between 'funds held but not owned' and 'funds owned but not held'
- Typically, the float of a P&C insurance company is positive

# Insurer float magnitudes

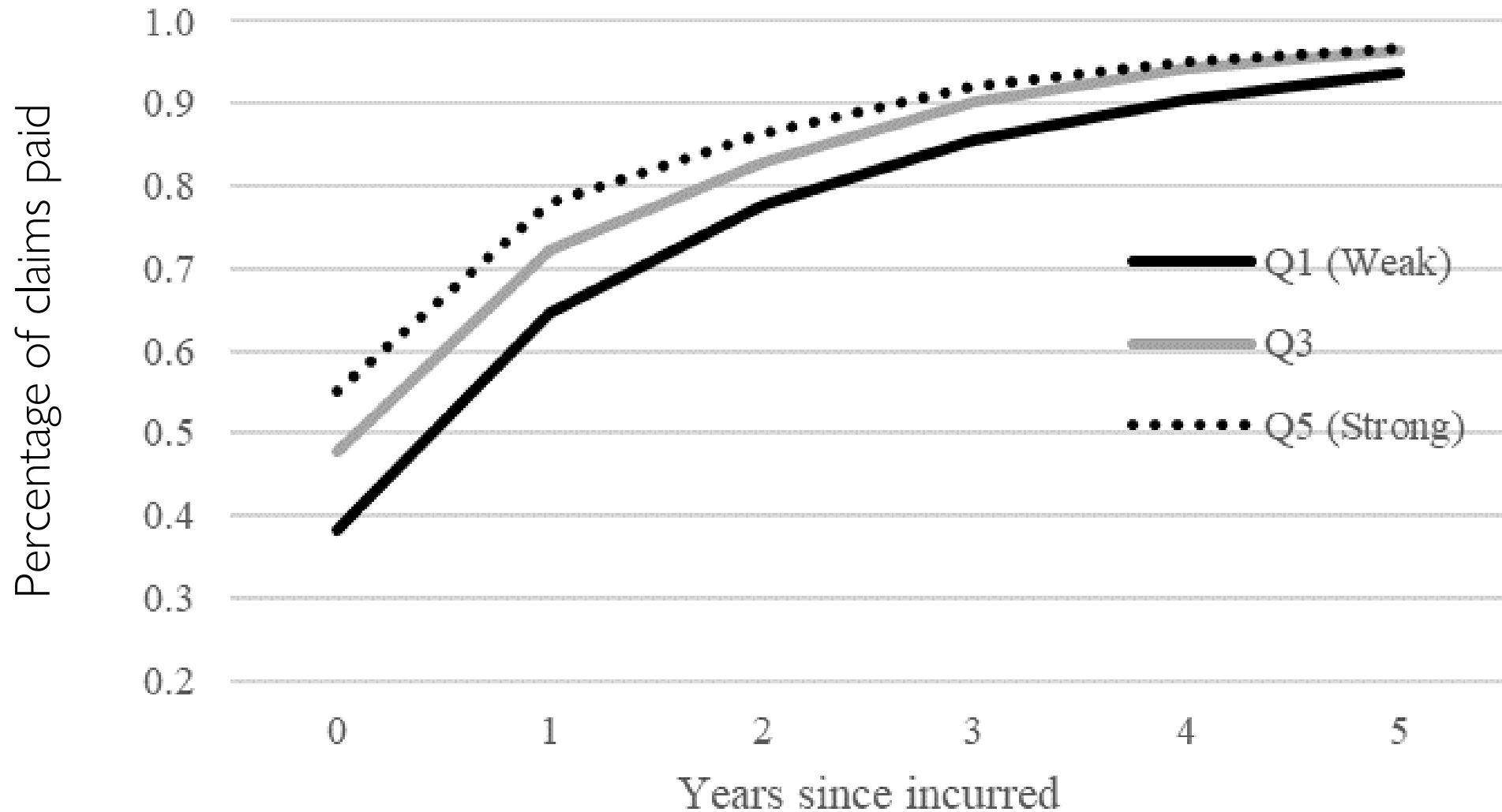


# Possible responses to a negative shock and a surge of claims

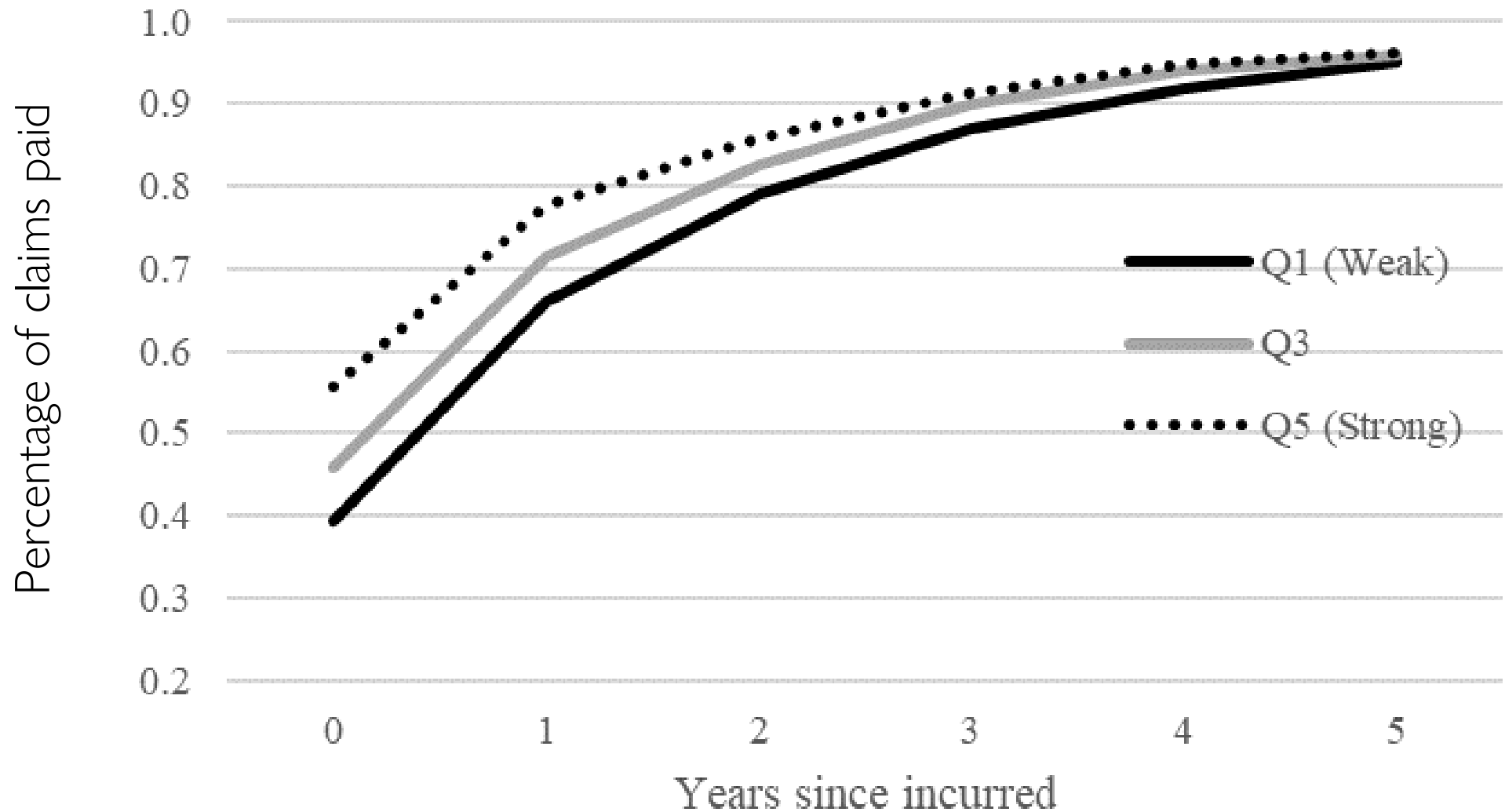
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| Cash                                | Loss Reserves                |
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- Paying claims
- Raising premiums
- Delaying claim payments

# Claim payment timing sorted by Risk Based Capital (RBC) ratio quartile



# Claim payment timing sorted by liquid investments to liabilities ratio



# Empirical analysis of payment delays

# Data

- NAIC regulatory filings (1996–2021) for all US P&C insurance companies
  - Financial Pages, Schedule P: Evolution of premiums paid, loss reserves, premium-to-loss ratio, payment duration
- **Focus on long-tailed insurance lines**
  - Homeowner and farmowner insurance, private passenger auto liability, worker compensation, commercial auto liability, and commercial multi-perils

# Financial Strength, Payment Speed and Pricing – Regression results

| Dependent variable                          | Fraction of incurred losses paid in incurrence year |                      |                      | Payment duration (years) |                      |                      | Premium to loss ratio |                     |                     |
|---------------------------------------------|-----------------------------------------------------|----------------------|----------------------|--------------------------|----------------------|----------------------|-----------------------|---------------------|---------------------|
|                                             | (1)                                                 | (2)                  | (3)                  | (4)                      | (5)                  | (6)                  | (7)                   | (8)                 | (9)                 |
| RBC ratio (decimal)                         | 0.007***<br>(0.001)                                 |                      | 0.002**<br>(0.001)   | -0.022***<br>(0.002)     |                      | -0.011***<br>(0.003) | 0.012***<br>(0.003)   |                     | 0.006*<br>(0.003)   |
| Liquid investments to liabilities (decimal) |                                                     | 0.073***<br>(0.008)  | 0.064***<br>(0.009)  |                          | -0.198***<br>(0.021) | -0.152***<br>(0.024) |                       | 0.116***<br>(0.024) | 0.091***<br>(0.026) |
| <u>Controls</u>                             |                                                     |                      |                      |                          |                      |                      |                       |                     |                     |
| log(Net total assets)                       | -0.137***<br>(0.009)                                | -0.160***<br>(0.010) | -0.162***<br>(0.010) | 0.313***<br>(0.025)      | 0.366***<br>(0.027)  | 0.375***<br>(0.028)  | -0.050**<br>(0.025)   | -0.063**<br>(0.031) | -0.069**<br>(0.030) |
| log(Net premiums)                           | 0.126***<br>(0.009)                                 | 0.157***<br>(0.009)  | 0.159***<br>(0.010)  | -0.290***<br>(0.025)     | -0.364***<br>(0.028) | -0.372***<br>(0.028) | -0.005<br>(0.025)     | 0.017<br>(0.032)    | 0.022<br>(0.031)    |
| Share of long-tailed businesses             | -0.021<br>(0.019)                                   | -0.005<br>(0.021)    | -0.010<br>(0.021)    | 0.093*<br>(0.053)        | 0.030<br>(0.056)     | 0.052<br>(0.057)     | -0.112*<br>(0.057)    | -0.114*<br>(0.063)  | -0.127**<br>(0.063) |
| Year fixed effects                          | YES                                                 | YES                  | YES                  | YES                      | YES                  | YES                  | YES                   | YES                 | YES                 |
| Observations                                | 14,920                                              | 12,474               | 12,474               | 11,260                   | 9,325                | 9,325                | 14,920                | 12,474              | 12,474              |
| R-squared                                   | 0.177                                               | 0.223                | 0.226                | 0.143                    | 0.172                | 0.181                | 0.082                 | 0.089               | 0.091               |

## Claim payment delays are at least as large as premium adjustments

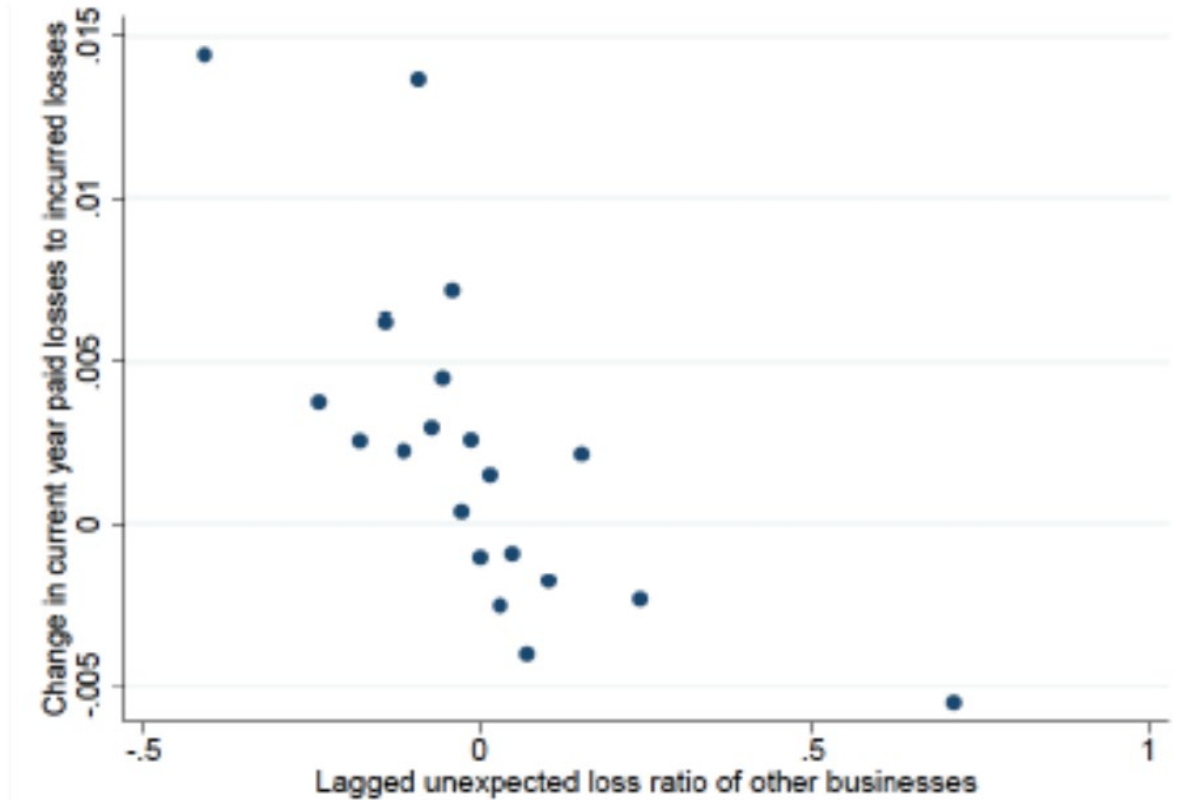
- For an average insurer, **an inter-decile increase in the RBC ratio** translates in an additional loss and LAE reserve of **at least \$104 million**
- **In comparison to pricing**, the inter-decile increase in the RBC ratio is associated with the premium difference of **about \$95 Million**

## What does it mean to Sam and Rossana?

- Households borrow from credit cards at very high interest rates ranging 14-25% (Telyukova, 2013),
- Average payment duration of 0.96 years implies a cost to households in terms of time value of money as high as \$35-57 million, or 12-19% of incurred losses
- Switching to insurers in the top vs bottom decile could hypothetically reduce the delay by about 0.35 years, which translates to about 4-8% cost savings

# Insurers respond to unexpected shocks by increasing delays

- Insurers slow the pace of payments in response to shocks to own lines
- More intriguingly, insurers also slow the pace of payments in response to shocks on unrelated lines



# Unexpected Losses in “Own” Business Lines

| Dependent variable             | $\Delta$ Fraction of incurred<br>losses paid in incurrence year<br>(1) | $\Delta$ Payment<br>duration (years)<br>(2) | $\Delta$ Premium<br>to loss ratio<br>(3) |
|--------------------------------|------------------------------------------------------------------------|---------------------------------------------|------------------------------------------|
| Loss ratio of “own” businesses | -0.048***<br>(0.013)                                                   | 0.161***<br>(0.051)                         | 1.849***<br>(0.086)                      |
| Controls, Firm FE, Year FE     | YES                                                                    | YES                                         | YES                                      |
| Observations                   | 9,883                                                                  | 7,468                                       | 9,883                                    |
| R-squared                      | 0.060                                                                  | 0.048                                       | 0.287                                    |

# Unexpected Losses in “Other” Businesses

| Dependent variable                                                      | $\Delta$ Fraction of incurred losses<br>paid in incurrence year |                      |                      | $\Delta$ Payment duration (years) |                     |                     |
|-------------------------------------------------------------------------|-----------------------------------------------------------------|----------------------|----------------------|-----------------------------------|---------------------|---------------------|
|                                                                         | (1)                                                             | (2)                  | (3)                  | (4)                               | (5)                 | (6)                 |
| Loss ratio of “other” businesses                                        | -0.024***<br>(0.006)                                            | -0.023**<br>(0.010)  | -0.024*<br>(0.013)   | 0.054**<br>(0.023)                | 0.114***<br>(0.042) | 0.136***<br>(0.043) |
| Loss ratio of “other” businesses<br>× RBC ratio                         |                                                                 | -0.000<br>(0.001)    |                      |                                   | -0.007*<br>(0.004)  |                     |
| Loss ratio of “other” businesses<br>× Liquid investments to liabilities |                                                                 |                      | -0.000<br>(0.008)    |                                   |                     | -0.050**<br>(0.022) |
| Loss ratio of “own” businesses                                          | -0.041***<br>(0.014)                                            | -0.042***<br>(0.014) | -0.041***<br>(0.014) | 0.150***<br>(0.053)               | 0.147***<br>(0.053) | 0.148***<br>(0.052) |
| Controls; Firm FE; Year FE                                              | YES                                                             | YES                  | YES                  | YES                               | YES                 | YES                 |
| Observations                                                            | 9,766                                                           | 9,766                | 9,766                | 7,394                             | 7,394               | 7,394               |
| R-squared                                                               | 0.063                                                           | 0.063                | 0.063                | 0.047                             | 0.048               | 0.048               |

# Analysis of customer complaints

# Claim payment **delays directly affect** policyholders

- Customer complaints can be an indicator of
  - Insurer's strategic claim handling tactics: more delays → more complaints
  - Insurer's clientele: more sophisticated customers → more complaints
- Analysis of complaints data provide insights into:
  - How customers **respond to delays**
  - Whether **customer sophistication** affects delay strategies
  - The **effectiveness of complaints** in reducing delays
- Data on customers' complaints
  - Publicly available data from the Texas Department of Insurance, 2011 – 2024
  - Standardized data collected by the NAIC from the US state regulators, 2014-2024



# Complaints as a Disciplinary Force

- Insurers facing more complaints tend to delay payments less
  - A one standard deviation increase in complaints reduces delay tactics by 69%
- Who complains most?
  - Higher complaint rates in:
    - Homeowners & auto insurance (80% of all complaints)
    - Policyholders in high-income areas
  - Less financially sophisticated customers complain less → May face more delays

# Conclusion

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- Financially stressed insurers delay claims to manage liquidity, alongside raising premiums
- Delays expand float, providing interest-free financing
- Most common among insurers with low RBC and poor liquidity
- Less sophisticated customers face more delays
- Policy implications:
  - Monitor payment timing, not just solvency or pricing
  - Enforce prompt payment laws and penalties
  - Improve transparency to aid consumer decisions