Who Consumes the Credit Union Tax Subsidy?

Robert DeYoung
Kansas University

John Goddard
Aberystwyth University

Donal G. McKillop
Queen’s University Belfast

John O.S. Wilson
University of St Andrews
Summary

- Credit unions are exempt from paying income taxes.
- These tax savings are supposed to subsidize the provision of financial services to credit union members.
- Diffuse ownership, weak governance and operational inefficiencies may prevent credit union members from receiving the full measure of these tax subsidies.
- We estimate a structural model of profit inefficiency for a quarterly data panel of US commercial banks between 2005 through 2014.
- We then use the estimated model parameters to evaluate the relative performance of matched pairs of US credit unions and commercial banks.
- Our results suggest that the bulk of the tax subsidy does get passed along to credit union members, mainly in the form of above-market deposit interest rates (and to a lesser extent to borrowers in terms of lower loan rates), BUT some of the subsidy gets diverted away from credit union members.
Credit unions are non-profit, tax-exempt financial cooperatives that provide consumer credit, mortgage finance, savings vehicles, and payment services to their members.

In exchange for their exemption from paying federal and state corporate income taxes, credit unions have historically accepted limits on their size and scope.

Credit union membership is restricted to persons who share a common bond

- (members must be employed in the same firm or profession, or live in the same geographic area)

The financial activities of credit unions are limited

- (credit unions can only lend to their members, with a limited percentage of those loans going to member-owned businesses).
In recent years, the NCUA has approved new rules that relax restrictions on membership and activities.

- Loose restrictions on the amount of business loans that credit unions can make to members (increasing from 12.5% to 25% total assets)
- Less restrictive field-of-membership rules for a common bond
- Allowing credit unions to raise financial capital from non-member external sources
- Allowing credit unions to securitize loans

Banks have fought back

- A suit filed by the Independent Community Bankers of America (ICBA) against the business lending rule was dismissed in 2017.
- A suit filed by the American Bankers Association (ABA) against the field-of-membership rule was successful in March 2018.
Because small and mid-sized commercial banks compete directly with credit unions in consumer credit, savings products, and payments services, bankers have long complained that the credit union tax exemption is an unfair competitive advantage.

- These tax savings to subsidize below-market loan interest rates and above-market deposit interest rates for credit union members.

Furthermore, federally chartered credit unions are exempt from the provisions of Community Re-investment Act to which community banks must adhere.

From the banks’ point of view, the progressive relaxation on the restrictions on credit union activities and membership will simply amplify this unfair competitive advantage.

The congressional Joint Committee on Taxation calculates the credit union tax exemption will cost $14.4 billion between 2016 and 2020.
Those defending the tax exempt status of credit unions emphasise that

- credit unions are not-for-profit financial institutions who serve a membership many of whom are of modest means and who may have difficulty in accessing alternative sources of credit.

- In serving their members, credit unions may provide many services at a reduced cost.
  - These services include the provision of small loans and low balance share accounts, and financial advice and counselling.

- Proponents of the tax subsidy argue that the taxation of credit unions would create pressure to eliminate some of these subsidised services.

- Taxing credit unions may potentially raise the cost of providing credit to borrowing members and reduce the dividends payable to saving members.
In this paper, we ask two linked questions:

First, is the entirety of the tax subsidy passed, as implicitly mandated, to credit union members as above market deposit rates and/or below-market loan rates?

- If so, the policy debate might centre on unfair competitive effects on commercial banks.

Second, is a portion of the tax subsidy passed to other CU stakeholders, such as CU employees?

- If so, the policy debate expands to consider the allocative efficiency of the CU tax subsidy itself.
Why might the tax subsidy NOT be passed through to members?

- At credit unions there is no profit motive to guide managers’ resource decisions.
- Management must balance the interests of multiple corporate stakeholder groups (depositors, borrowers, employees), none of which has a strong incentive to monitor managers.
- Governance of CUs is based on one-member-one vote therefore business acumen of directors may be limited.
- No externally held capital, thus no threat of acquisition to constrain the actions of management.
- Thus effective internal and external monitoring of management is limited in CUs.
- Consequently CU managers may make inefficient decisions based on their own self-interest with some portion of these inefficiencies funded by taxpayers.
This study adds to the literature in several related areas,

- Corporate governance of regulated financial institutions (Caprio et al, 2007)

Frame et al (2003), who find that Credit unions incurred higher costs than mutual thrifts, and conclude that at least a portion of the tax benefit was redirected away from credit union members.
A Cursory Glance at Deposit Rates (Bank Rates – CU Rates)

![Chart showing deposit rates over time for different types of accounts: interest checking, regular savings, 1-year CD, and 5-year CD.]
A Cursory Glance at Loan Rates (Bank Rates – CU Rates)
Hypotheses

- **Mandated Inefficiencies Hypothesis (H1):** Credit unions operate under a legislative mandate to spend their tax subsidy in ways that expand households’ access to financial services.
  - Because of this, profits at credit unions will be lower than pre-tax profits at otherwise similar commercial banks.

- **Absolute Inefficiencies Hypothesis (H2):** The credit union corporate governance environment provides stronger incentives and greater opportunities for non-maximizing behaviour than at commercial banks.
  - A portion of the credit union tax subsidy will be absorbed by these inefficiencies, thus reducing the generation of mandated member benefits.
At an efficiently run CU, **absolute** inefficiencies will be zero and the dollar value of **mandated inefficiencies** will be exactly equal to the dollar value of the tax subsidy.

At an inefficiently run CU, there will be non-zero **absolute inefficiencies** and the dollar value of the tax subsidy will equal the sum of the dollar values of the **absolute** and **mandated inefficiencies**.

Any increase in absolute inefficiencies must be offset dollar for dollar by a reduction in mandated inefficiencies.
tax subsidy
(“inefficiency gap”)

Banks

Credit Unions

Incidence of Subsidy

to members: mandated inefficiency
to others: absolute inefficiency
Data

- We construct a balanced panel of quarterly data for US commercial banks and CUs from 2005 through 2014.
- We exclude small banks and credit unions as these have inherently different business models.
- We also exclude very large banks.
- The resulting balanced panel includes 40 quarterly observations of 1353 CUs and 1883 banks.
The model focuses on profit efficiency (Berger et al, 1993, JBF; DeYoung & Nolle, 1996, JMCB).

- Each bank maximizes short-run profits by choosing levels of four variable netputs.
- It produces loans and securities and purchases labour and deposits.
- We assume all netputs are traded in competitive markets, so banks take netput prices as given (the borders of the 50 US states to define local netput markets).
- A number of factors are fixed (physical assets, risk-weighted assets, equity capital, non-interest income).
- The four netput demand functions are derived from the profit function.
- Profit inefficiency is the difference between actual profit (observable) and optimal profit (estimated).
  - Equivalently, profit inefficiency is the sum of the n individual netput inefficiencies, which where the netputs are observable, but the netput inefficiencies are unobservable and must be estimated.
- Total profit inefficiency scaled as a proportion of assets is given by $\frac{Ineff_i}{assets_i}$.
Commercial banks seek to maximize profits, while credit unions by mandate are not profit maximizers.

We estimate the parameters of the profit inefficiency model using just data for commercial banks, and then apply the estimated model parameters to data for both banks and credit unions to calculate their relative profit inefficiencies.

This model allows us to:
- Generate a profit inefficiency score for each bank and credit union
- Disaggregate inefficiency scores by input- and out-specific sources
- Disaggregate inefficiency scores by quantity and pricing inefficiencies
- Compares averages of above inefficiency scores across banks and credit unions

We produce two sets of results
- An informal analysis based on all institutions
- A formal matched-pairs sample of banks and CUs. (where we match each CU with a bank of similar age and asset size located in its home state).
Methods

- We produce two sets of estimations
  - An informal analysis based on all institutions.
  - A formal matched-pairs sample of banks and CUs. (where we match each CU with a bank of similar age and asset size located in its home state.

- We conduct formal statistical tests of hypotheses $H1$ and $H2$ on a matched pair sample of banks and credit unions.

- For each quarterly observation for the 1,358 credit unions in our data, we search (with replacement) among the 2,901 commercial banks for a bank that is similar along n dimensions: asset size, age, located in the same broad region, located in a local market with similar urban density.

- Profit inefficiency gap $p = (\text{Ineff/Assets})_{p, \text{credit union}} - (\text{Ineff/Assets})_{p, \text{bank}}$
## Results (Relative Profit inefficiency)

<table>
<thead>
<tr>
<th></th>
<th># of pairs</th>
<th>Market prices</th>
<th>Internal prices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All matched pairs</strong></td>
<td>1,084</td>
<td>.00237***</td>
<td>.01224***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(9.29)</td>
<td>(32.99)</td>
</tr>
<tr>
<td><strong>Size subsamples</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$50m-$100m</td>
<td>349</td>
<td>.00216***</td>
<td>.01279***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(8.41)</td>
<td>(25.27)</td>
</tr>
<tr>
<td>$100m-$200m</td>
<td>286</td>
<td>.00275***</td>
<td>.01214***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(10.14)</td>
<td>(21.12)</td>
</tr>
<tr>
<td>$200m-$500m</td>
<td>277</td>
<td>.00315***</td>
<td>.01176***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(9.15)</td>
<td>(21.62)</td>
</tr>
<tr>
<td>$500m-$6.306b</td>
<td>172</td>
<td>.00089</td>
<td>.01205***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.66)</td>
<td>(7.27)</td>
</tr>
</tbody>
</table>
Results (Relative Profit inefficiency)

- Average estimated profit inefficiency gaps for the matched pairs suggest average gap is positive and statistically significant for the matched pair sample.
- This implies greater amounts of profit inefficiency at credit unions than at similar commercial banks (with exception of largest credit unions).
  - When expressed in terms of market netput prices, the quarterly profit inefficiency gap averages about 24 basis points (0.00237) per dollar of assets, or approximately 95 basis points annually.
  - When expressed in terms of the netput prices actually paid or received by individual banks and credit unions, the quarterly inefficiency gap expands to 122 basis points (0.01224) per dollar of assets, or approximately 490 basis points annually.
  - Hence, quantity inefficiencies account for only about 19% (.00237/.01224) of the profit inefficiency gap at credit unions, with pricing inefficiencies accounting for the remaining 81%.
## Results (Relative Netput Inefficiency)

<table>
<thead>
<tr>
<th>Inefficiency Gaps</th>
<th>Loans</th>
<th>Investments</th>
<th>Labour</th>
<th>Deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Total inefficiency/Assets (internal prices)     | -0.00088***  
-4.54   | 0.00222***  
9.03   | -0.00003   
-0.57   | 0.01093***  
55.16   |
| Quantity inefficiency/Assets (market prices)    | -0.00071***  
-3.67   | 0.00139***  
11.63   | 0.00011    
1.51    | 0.00157***  
18.13   |
| Pricing inefficiency/Assets                     | -0.00017***  
-3.46   | 0.00083***  
4.27    | -0.00014***  
-3.95   | 0.00936***  
56.61   |
Results (Relative Netput Inefficiency)

- We decompose the profit inefficiency gaps into four netput-specific inefficiency gaps.
- Deposit inefficiencies account for the lion’s share of the profit inefficiency gap between credit unions and banks.
- Credit unions are a statistically and economically significant 109.3 basis points per dollar of assets more deposit-inefficient each quarter than similar commercial banks.
- This result is consistent with mandated inefficiencies over-using deposit inputs (quantity inefficiency)
- and paying super-market deposit rates (a positive pricing difference) relative to banks are consistent with the credit union mandate to subsidize depositor members.
The investment inefficiencies gap is also statistically significant and economically large, as credit unions are 22.2 basis points per dollar of assets more investment-inefficient than banks.

- This result is consistent with absolute inefficiency, as credit unions have no mandate to subsidize non-loan investments.

Credit unions are 8.8 basis points per dollar of assets less loan-inefficient (more loan efficient) than banks.

- This result is consistent with mandated inefficiencies so long as it is driven by high production of loan outputs (quantity efficiency) rather than by charging low loan rates (a positive pricing difference) relative to banks.

The labour inefficiency gap is not statistically different from zero.
The matched pair analysis confirms the existence of substantial mandated inefficiencies at credit unions (our hypothesis H1) as well as non-trivial absolute inefficiencies at credit unions (our hypothesis H2).

mandated inefficiencies in the form of benefits to credit union depositors comprise the largest portion of this profit inefficiency gap.

In contrast, credit unions are slightly more loan efficient on average than similar banks, as indicated by their negative quarterly loan inefficiency gap of about 9 basis points.

Still, credit unions operate with economically non-trivial levels of absolute inefficiencies in terms of investment securities.
tax subsidy ("inefficiency gap")

- to members: mandated inefficiency
- to others: absolute inefficiency

Banks

Credit Unions

Incidence of Subsidy
to others: absolute inefficiency

to members: mandated inefficiency

tax subsidy ("inefficiency gap")
Concluding Comments

- In the US, credit unions are exempt from paying federal income taxes yet they compete directly in credit and deposit markets with small commercial banks that do pay income taxes.
- Changes in regulation have lessened differences with banks.
- Should credit unions still be exempt from income taxes?
- The evidence in this study suggests that most of the subsidy is passed along to members with saver members benefitting most.
- but some of the tax subsidy gets diverted away from credit union members, predominantly due to inefficiencies in non-loan investments portfolios
- Overall, the average credit union has been in substantial compliance with its legislative mandate.