Development of a Canadian Services Producer Price Index for Securities Brokerage

Lucy Opsitnik
Chief
Finance, Insurance and Professional Services
Producer Prices Division
Statistics Canada
31st Voorburg Group Meeting, September 2016
Zagreb, Croatia
Outline

- Overview of financial services index development in Canada
- Canadian brokerage service lines
- Industry structure and size
- Comparison: industry and products
- Turnover/Output
- Securities Brokerage Services Price Index (SPSPI)
  - Development overview
  - Consultation, results and recommendation
  - Service line coverage and data collection
  - Index calculation
  - Lessons learned
- Conclusion
- Next steps
<table>
<thead>
<tr>
<th>Commodity</th>
<th>Banking and other depository credit intermediation</th>
<th>Non-depository credit intermediation</th>
<th>Activities related to credit intermediation</th>
<th>Financial investment, services, funds and other financial vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking and other depository credit intermediation services - explicit charges</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposit intermediation services indirectly measured (FISIM)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential mortgage intermediation services indirectly measured (FISIM)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other loan intermediation services indirectly measured (FISIM)</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Non-depository credit intermediation services - explicit charges (fees)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other services related to credit intermediation</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Investment banking services</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Security brokerage and securities dealing services</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Portfolio management services (MER)</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Investment counselling services</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Holding company services and other financial investment and related activities</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Trusteed pension fund services</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mutual funds (cost of service) and other similar services--loads &amp; trailers</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Canadian brokerage service lines

- Transaction Based (Commissions)
  - Full Service, retail and institutional
  - Discount

- Fee-Based Brokerage (Fees)
  - Non-discretionary
  - Discretionary

- Mutual Fund Sales
  - Commissions (front and back end)
  - Fees (trailer fees)

- Margin Lending (Net Interest)

- Foreign Exchange (Other)
Canadian Industry, by firm type

- Integrated: 73%
- Institutional: 12%
- Retail: 15%

Voorburg Group 2016
Structure and size, by revenue category

<table>
<thead>
<tr>
<th>Revenue Category</th>
<th>Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commissions</td>
<td>$1,400</td>
</tr>
<tr>
<td>Investment banking</td>
<td>$800</td>
</tr>
<tr>
<td>Fixed income trading</td>
<td>$400</td>
</tr>
<tr>
<td>Equity trading</td>
<td>$200</td>
</tr>
<tr>
<td>Net interest</td>
<td>$1,000</td>
</tr>
<tr>
<td>Fees</td>
<td>$1,200</td>
</tr>
<tr>
<td>Other</td>
<td>$600</td>
</tr>
</tbody>
</table>

Legend:
- Integrated
- Institutional
- Retail FSB
- Retail Introducers
## Comparison: industry and products

<table>
<thead>
<tr>
<th>Investment Industry Association of Canada Revenue Categories</th>
<th>Securities Brokerage Industry (NAICS)</th>
<th>Securities Brokerage and Securities Dealing Products (Supply-Use Tables)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commissions</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Fees</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Other</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Net interest (incl. margin lending)</td>
<td>✓</td>
<td>In Supply-Use tables under “Other Loan Intermediation”</td>
</tr>
<tr>
<td>Mutual Funds</td>
<td>✓</td>
<td>In Supply-Use tables under “Mutual Funds Cost of Service”</td>
</tr>
<tr>
<td>Equity &amp; Fixed Income Trading</td>
<td>In NAICS under “Investment Banking and Securities Dealing”</td>
<td>✓</td>
</tr>
<tr>
<td>Investment Banking</td>
<td>In Supply-Use Tables under “Investment Banking and Securities Dealing”</td>
<td></td>
</tr>
</tbody>
</table>
Turnover/Output

Turnover:

- Quarterly Survey of Financial Statements
  - Enterprise level program
  - Largest brokerage firms in Canada fall under NAICS 52211 – Banking

Output:

- Output commodity – Security brokerage and securities dealing services (partial coverage) – allocated to two industries:
  - Banking and other depository credit intermediation
  - Financial investment, services, funds and other financial vehicles

- Output is calculated using the following data sources:
  - Quarterly Survey of Financial Statements
  - Investment Industry Association of Canada
    - Data from Investment Industry Regulatory Organization of Canada
Securities Brokerage Services
Price Index (SBSPI)

Program Development
SBSP development overview

- Industry research
  - Main activities of the industry
  - Existing sources of data

- Pilot development
  - Industry consultation
  - Questionnaire development
  - Questionnaire testing
  - Launch of pilot
  - Post pilot follow-up
# Price determining characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person Conducting Transaction</td>
<td>Specialist, registered representative, floor broker, self, etc.</td>
</tr>
<tr>
<td>Specific Type of Security</td>
<td>TD common stock, 5 yr. T-bond, GM 30 year bond, etc.</td>
</tr>
<tr>
<td>Quantity Purchased</td>
<td>100 shares of stock, 5 option contracts, 10 T-bills, etc.</td>
</tr>
<tr>
<td>Market Value of Security</td>
<td>Price per share, option premium, etc.</td>
</tr>
<tr>
<td>Type of Client</td>
<td>Retail, institutional, government, other broker, etc.</td>
</tr>
<tr>
<td>Trading Volume of Client</td>
<td>Trades less than 10 times/yr, trades large volumes frequently, etc.</td>
</tr>
<tr>
<td>Account Status of Client</td>
<td>Total account value over $100,000, etc.</td>
</tr>
<tr>
<td>Type of order</td>
<td>Limit, market, stop, etc.</td>
</tr>
<tr>
<td>Order placed through</td>
<td>By telephone, by registered representative, by modem, by Super Dot, etc.</td>
</tr>
<tr>
<td>Additional services provided</td>
<td>Research if provided, will raise commission rates charged.</td>
</tr>
<tr>
<td>Additional charges</td>
<td>Fixed fee cover transfers and clearing costs, versus odd lots.</td>
</tr>
<tr>
<td>Payment for order flow</td>
<td>Brokers with seats on the exchange versus “introducing” broker.</td>
</tr>
</tbody>
</table>
Consultation questionnaire

**Types of:**
- Clients
- Services by line
- Research and advice included in price
- Discounts offered, by type of client
  - factors considered: amount and frequency
  - Offers made to institutional clients
- Transactions executed for free
  - factors considered: when to provide
- Contractual agreements / structure
- Special accounts offered to institutional clients / e.g. where they might be able to execute their own trades

**By type of client, or transaction:**
- Services provided
- Fees charged
- Pricing factors taken into consideration
- Research and advice included in price

**General:**
- Maximum allowable trades
- Minimum account balance requirements
- Services provided but charged separately
Results and recommendation

- Firms can match transaction and account values to associated revenue type, for given period
- Some requested more tier ranges
- Price lists might be included in the client agreement but might differ from advertised lists
- Pricing Latitude varies significantly among firms
- In practice, free trades are rare
- “Householding” of accounts, to meet minimums, but concept is subject to interpretation

Recommendation: Unit value price
**SBSPI Service line coverage**

**Service Lines**
- Transaction Based
- Fee-Based (Non-Discretionary)
- Advisor Managed (Discretionary)

**Pricing Models**
- Section A
  - Cdn Exchange Listed Equities
- Section B
  - Blended
  - Asset-Class Based
- Section C
  - Blended
  - Asset-Class Based

**Tables**
- Table 1
  - 1) Equity
- Table 2
  - 2) Fixed Income

- Table 1
  - 1) Equity
- Table 2
  - 2) Fixed Income
## SBSSI Data Collection

<table>
<thead>
<tr>
<th>Account Value (or Trade Value) Range ($)</th>
<th>Total Fees (or Commissions) ($000's)</th>
<th>Total Value of Accounts (or Trade) ($000's)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>up to $99,999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$100,000 - $249,999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$250,000 - $499,999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$500,000 - $999,999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1 Million - $1.9 Million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2 Million - $4.9 Million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$5 Million - $9.9 Million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$10 Million +</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SBSPi calculation

1. Each tier, A, is taken to be a product providing a homogeneous level of service

2. Price is calculated as \( \frac{\text{Total Commissions}}{\text{Total Trade Values}} \) or \( \frac{\text{Total Fees}}{\text{Total Account Values}} \), per tier

   E.g., Price for service A \( \Rightarrow P_A = \frac{B_A}{C_A} \)

3. Relatives are calculated per tier \( \Rightarrow P_{A,t} / P_{A,t-1} \)

4. Relatives within each grid are weighted, using tier total fees or commissions, to come to the price of each service line

5. Index is weighted using data collected on the questionnaire
SBSPSI Lessons learned

- Population on central register should be confronted against industry list

- Target the right people in consultation
  - Subject matter: necessary to understand the idiosyncrasies of the industry
  - IT: necessary to understand if collection plans are realistic
  - From this, learn who is the right respondent for the survey

- Significant pricing flexibility, numerous account types and a very dynamic industry challenge pricing comparability and repetitiveness

- Frequent weight updates will result in an index which considers the dynamic aspects of the industry
Conclusion

- The concepts of output and data sources line up well between national accounts and our SBSPI.

- Canadian industry is highly concentrated where a handful of firms have significant industry coverage, therefore, (non-)response has a major impact on results.

- Developments in regulation add another layer of complication.

- Work will continue to expand coverage and address challenges with current pilot.
Next steps

- Consultation to address current pilot issues
  - Volatility in some response
  - Respondent error, and non-response
  - Record-keeping practices (SM vs. IT)

- Expansion of coverage using alternative data source for institutional firms
Securities Brokerage Services
Price Index

Lucy Opsitnik
Chief
Finance, Insurance and Professional Services
Producer Prices Division
Statistics Canada
Lucy.Opsitnik@canada.ca
1-613-882-1558