



## Results of the pilot project on the development of price index for business insurance

### Executive summary

In January 2018, the CSO was tasked by the Cost of Insurance Working Group (CIWG) to consider the feasibility of collecting price information on the cost of insurance to businesses, specifically employers' liability and public liability.

In January 2019, the CSO published its *Report on the Feasibility of Collecting Price Information on the Cost of Insurance to Businesses*<sup>1</sup>. That report recommended that a pilot project be initiated to examine a technology solution that involved automating the submission of premium quotation requests to the online pricing portals of the insurance companies.

It was noted in the report that CSO's decision on whether a price index for business insurance could be compiled would be based on the success of collecting the raw data (premium quotations), the quality of the data, the capacity to calculate a comparable and representative price index from the data and the costs associated with creating and maintaining a new index.

While the pilot project made progress from a technical perspective, the CSO has concluded that the project will not ultimately meet the data needs originally identified by the CIWG. Based on this conclusion, the CSO has decided to discontinue the project on the development of a price index for business insurance. This decision was taken for the following reasons:

- The proposed approach would only cover the sectors of business insurance which can be priced via the brokers' online portal – i.e. office and retail insurance for smaller businesses.
- Other categories of business insurance (e.g. creches, childcare facilities, hotels, restaurants and pubs) would not be covered. Many of the concerns about the cost of insurance relate to these sectors but the project will not provide any statistics on them.
- In the time period analysed by the study, the pilot study did not observe any price changes in the risks that were sold via the online portals of the insurance companies covered by the study. This is consistent with information provided by the insurance companies. While this may be representative of the risks sold online, it is unlikely that these price changes are representative of the wider business insurance market.
- The price index would be based on a sample of at most six insurance companies but potentially as few as three companies.
- The comparability of the price quotations is difficult to monitor over time due to changes by the insurance companies to the terms and conditions attached to policies.

<sup>1</sup>[https://www.cso.ie/en/media/csoie/releasespublications/documents/in/csobusinessinsurancereport/CSO\\_Report\\_Business\\_Insurance\\_Jan2019.pdf](https://www.cso.ie/en/media/csoie/releasespublications/documents/in/csobusinessinsurancereport/CSO_Report_Business_Insurance_Jan2019.pdf)

Ultimately, it was determined there would be limited user benefit to publishing a price index on business insurance that was not representative of the wider business insurance market. In fact, rather than bringing increased transparency to the market, an indicator with limited scope could add confusion. The CIWG requirement was to publish a price index that would be capable of informing policy formulation. The CSO have concluded that the proposed solution would not meet that requirement. Therefore, the CSO decided it would not be prudent to continue investing in the development of a price index for business insurance.

## **Background**

In January 2018, the Cost of Insurance Working Group (CIWG) recommended that the CSO commence a feasibility study on the development of a price index on the cost of insurance to businesses, primarily in the Public and Employer Liability (EL/PL) lines. The background to the study and to the CIWG's recommendation, was the absence of quality information on business insurance, including official statistical data, to inform policy formulation by government.

Through 2018, the CSO contacted colleagues in other National Statistical Institutes (NSIs), conducted a number of site visits to insurance companies and insurance experts and examined the methodologies for data collection, compilation and production of other insurance price indices. The knowledge developed during this consultation period led to the production of a feasibility report in early 2019, which was accompanied by a presentation to the CIWG in January 2019.

## **Publication of the Feasibility Report**

In January 2019, the CSO published the *Report on the Feasibility of Collecting Price Information on the Cost of Insurance to Businesses*. In this report, the CSO detailed the experience in the CSO of producing price indices for insurance services, the challenges that would be associated with creating such an index for business insurance and the current international best practices.

The feasibility report emphasises the fact that one of the more difficult aspects of producing a price index is ensuring that the calculated price changes do not include any changes in the characteristics of the good or service being surveyed. For the likes of grocery type products this is relatively simple but ensuring constant quality for service prices is much more difficult. For insurance service prices, the method used to maintain constant quality in the service being priced is the use of representative profiles being priced over time.

### *Representative Profiles:*

The principle of measuring representative profiles is that each insurance company would provide quotations to the CSO for a set of profiles with the same specifications and are subsequently surveyed each month and the prices compared over time. This is a common method used at international level to measure inflation of insurance service prices.

The feasibility study also detailed the experience of other NSIs with developing price indices for business insurance. The main learning from CSO discussions with other NSIs is how few countries have attempted to produce a price index for business insurance. The only precedents the CSO encountered were in the United States and Canada and other countries indicated that they had no plans to develop such indices in the future due to the difficulty associated with the production of price indices for business insurance. This lack of international precedent meant that there were large methodological challenges for the CSO to overcome.

The experience of Canada in developing an insurance price index was a significant focus of the feasibility report as it highlighted the issue of response burden and the resulting sample attrition due to the burden placed upon insurance companies. As the number of respondents decreased, the calculated price indices began to exhibit fluctuations related to the shrinking sample size rather than actual price dynamics. In addition to this, the requirement to maintain constant quality throughout the survey required the representative profiles to be frequently updated.

From meeting with insurance companies and industry experts, the CSO was able to get a better understanding of the insurance industry and the mechanics of how EL and PL insurance is priced in the market.

From these conversations with NSIs and industry experts the CSO were able to determine that the main challenges associated with developing a price index were as follows:

- The heterogeneity of the market meant many representative profiles or survey forms would have to be created.
- The experience in Canada suggested that response burden was crucially important to the overall quality of the price index.
- A method should be developed to ensure that the price-determining characteristics inherent in the price quotations are kept constant over time.
- The price index should be representative of the overall business insurance market for EL and PL.

The feasibility study led to seven data collection options being considered by the CSO. These seven collection options were assessed under the following criteria:

- Quality
- Burden on respondents
- Meeting user needs
- Cost

A summary of the assessment of the data collection options can be found in the feasibility report located at: [https://www.cso.ie/en/media/csoie/releasespublications/documents/in/csobusinessinsurancereport/CSO\\_Report\\_Business\\_Insurance\\_Jan2019.pdf](https://www.cso.ie/en/media/csoie/releasespublications/documents/in/csobusinessinsurancereport/CSO_Report_Business_Insurance_Jan2019.pdf)

#### **Recommendations of the feasibility report:**

The CSO determined that only three of the methods were technically feasible and that two of these would be very difficult to put into practice. The third technically feasible option, using technology to automatically price a high volume of representative profiles, was an innovative option making use of a recently available commercial broker solution and was worth exploring further to determine whether it could be put into production.

This method used an existing online broker platform which allows a broker to receive price quotes from a number of insurance companies at once. This is similar to a price comparison website; however, it requires the broker to have access to each of the insurance companies' broker portals. The CSO's plan was to send a large number of representative profiles to insurance companies at one time using this online platform and collect the price information using this system.

This option was chosen as it was considered to be the most efficient method to collect premium information for the representative profiles. This method addressed the problems encountered by Canada as there would be little to no involvement from the insurance companies beyond setting the CSO up with access to this online platform. This had the dual benefit of capturing a large enough sample to accurately measure a heterogeneous market while also minimising the risk of sample attrition.

The downside of this method of data collection was that the coverage of the price index would be restricted to sectors that can be automatically priced using pricing portals from the insurance companies. This limited the scope of the index to office and retail and didn't include other sectors where a quotation involved input from an insurance underwriter e.g. pubs, restaurants, childcare facilities etc. However, through meetings with the insurance industry, CSO learnt that while the current scope of businesses that could be priced via the online portals was limited, this would be expected to increase over time as the market matured.

The CSO carried out some very preliminary research with a technology company that supplies the online portal and determined that while collecting data from the portal was technically feasible, further work on a pilot basis would have to be carried out to determine whether long term, high volume data collection was viable. The pilot project would also give the CSO a chance to see whether the scope of businesses that may be priced on online portals could be improved over time.

## **Pilot project**

To further investigate the viability of the recommended solution, the CSO initiated a pilot project to test the collection of the data and the suitability of the data for a price index. This pilot project dealt with the following tasks:

- Getting access to the insurance companies' online broker portals.
- Meeting with user groups to determine if the proposed solution would meet user needs.
- Continuing to work with the third-party company to develop a method of data collection that would allow for long-term, high volume price collection.

### **Gaining access to only online broker portals**

In the early stage of the pilot project, the CSO's focus was to get access to the online broker portals of the six insurance companies available on the technology partner's price comparison portal. The CSO sent letters to all six of the insurance companies and conducted site visits to a number of those insurance companies to discuss the possibility of getting set up with access to the portal. These discussions dealt with the logistics around granting the CSO access to the online broker portals.

The meetings also allowed the CSO to determine the type of information that could be gathered from the online broker portals as well as whether the scope of the index would increase as the market matured. From these discussions, it became apparent that while the scope of the index was narrow, there was the possibility for the more high-risk sectors to slowly move towards this automated pricing system and therefore would allow the CSO to improve the scope of the index over time.

Of the six insurance companies the CSO contacted:

- Two companies were quick to come onboard with the project.
- Two companies required a Memorandum of Understanding (MOU) which took time to develop.
- One of the companies felt that the role they played in the market was too small to be considered in the price index.
- One company didn't respond to any communication from the CSO.

The CSO encountered some delays when it came to the agreement of Memorandums of Understanding and gaining access to the broker portals of insurance companies; the CSO only had access to three of the six insurance companies broker portals by the end of the pilot project. However, this was enough for the CSO to determine whether a long-term, high volume price collection was feasible.

### **Meeting with User Groups**

The CSO also ran a consultation with the main users of data on business insurance prices to determine whether the scope of the index satisfied user demands for more information on the cost of insurance to business. In these consultations, the CSO detailed that the initial scope of the index would only cover the office and retail markets and that higher risk sectors that required underwriters' input would not be covered. It was clear from meeting with these groups that the narrow scope of the index was a concern and, while an index was welcomed, the dissemination of the index would have to be very clear to ensure that the results of the index were not misinterpreted or misrepresented.

The possible expansion of the scope of the index over time was also a prominent topic of this consultation and CSO restated that while the current scope of the index was restricted, it was believed that as the market matured, the CSO would be able to expand the index to include sectors which currently require underwriting input.

As well as presenting the proposed methodology to user groups, the CSO presented a summary of the work done in 2019 to the Voorburg Group, a UN Working Group for Service Price Statistics. At this group, members of the Voorburg Group from other statistical offices were invited to give feedback on the proposed methodology. The main points raised by the Voorburg Group members were based on the limitations of the

scope of the price index and how the CSO were going to ensure the results of such an index were interpreted correctly.

## **Developing Data Collection**

Once the CSO began to gain access to the insurance companies' broker portal, it was possible for the CSO to begin the development of representative profiles to test the proposed data collection method.

The CSO's initial plan was to develop a small number of representative profiles for businesses in the office and retail sector to test the use of the third-party portal as the data collection method. These profiles would have to match the type of information entered by a broker into the online portals and therefore required up to 50 different variables depending on the type of business. The formulation of some questions / variables was sourced from existing CSO surveys, however the CSO had to work with the technology experts to determine the correct formulation and response categories.

Once these profiles were developed and tested, the CSO would develop a larger number of profiles (500+), which would then be priced monthly. These profiles would be developed, to the extent possible, to be representative of the business insurance market in Ireland.

The CSO also developed a method of automating the data collection using browser automation software. This programme worked its way through the profiles one-by-one, submitting them to the different insurance companies and collecting the quotations provided by the online portals. The CSO ran this automation software on a small number of profiles over a two to three-month period and while there were some promising results, a couple of issues with this method of data collection became apparent.

The most significant challenge associated with this type data collection was that the insurance companies frequently changed their questions on their broker portals, which meant that the representative profiles required constant maintenance. This maintenance often involved going back to the technology partner to determine whether a change was meaningful or not (i.e. did the change in question lead to a quality change in the profile). This constant need for consultation and maintenance was time consuming for both the CSO and the technology partner.

## **Results of the Pilot Project**

While there were some promising results from a technical point of view from the pilot project, there were some remaining issues with the proposed method of data collection that the CSO was unable to overcome. These are outlined below.

### **1. Scope of the Index**

It was noted in the feasibility report that the scope of the index would cover the retail and office sectors of the business insurance market. There was also an understanding from discussions with experts in the insurance sector that while the scope was narrow, the range of sectors that would be available to be priced online would increase over time. However, the CSO hasn't seen evidence of this so far. From discussion with the CIWG and other users, there are significant concerns that a price index with limited coverage would not bring greater transparency to the business insurance market.

### **2. Comparability of quotes over time**

When a price quotation is collected on the online portal, a number of terms and conditions apply, and this information is supplied in separate documentation provided to the broker. For example, the documentation may specify whether flood or theft cover is included in the quotation. The inclusions and exclusions in the terms and conditions can change over time and it is resource intensive to monitor these changes. Therefore, it is possible that changes in the quotations over time may relate to differences in the quality of the policy rather than reflecting actual price change.

### 3. *Lack of movement in prices*

During the data collection phase of the pilot project, it appeared that price changes occurred very infrequently on the online pricing portals. In fact, in the two to three-month period during which the CSO collected price quotations, there were no observed price changes for the small number of representative profiles in the sample. This finding was consistent with information provided by the insurance companies with regard to how actively they manage the risks that are sold online. However, while the lack of price change could accurately reflect the sectors being sold online, it may not reflect the wider insurance market. This could lead to a scenario, similar to the points made by both the user groups and members of the Voorburg Group, where the price index is misinterpreted.

### 4. *Representativeness of the Index*

While there are six insurance companies currently active on the online portal, one of those has indicated that they do not warrant inclusion in the data collection. This means that the index would be based on a sample of five insurance companies at most, with the possibility that it remains at just three insurance companies. This would call into question the representativeness of the index, especially at a time when there is anecdotal evidence that more and more insurance cover is being sought outside of Ireland.

### **Conclusion of the pilot project**

The CSO has concluded the pilot project and has decided not to continue the development of a price index for business insurance for the reasons set out above and specifically because the original objective of the project, i.e. the publication of a representative price index for business insurance, cannot be fully realised. For this reason, while the project has demonstrated an innovative approach to data sources and automation, it is prudent to cease investing further in the project.

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