

# **Voorburg Group on Services Statistics**

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## **A Producer Price Index for Accounting Services**

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## I. Summary

This paper describes a methodology for measuring annual price changes for accounting services for the whole of the Canadian economy as well as other related issues on sampling and gives a description of foreign countries practices for this service sector. The proposed methodology to measure price changes for this sector of the economy relies on the assumption that survey respondents pick and choose representative accounting services contracts and monitor these very same contracts through time<sup>1</sup>. Further, respondents are asked to evaluate, from period to period, what is attributable to a change in the service delivered to a client from what is attributable to a price change only.

Conventional services such as, auditing, review, general accounting, tax returns and bookkeeping services are covered in this article while services which are not repetitive such as: management consulting, bankruptcy and insolvency services are left aside.

## II. Introduction

In Canada, the accounting services industry consists primarily of companies that provide accounting, auditing, taxation and bookkeeping services. It represents a fairly large proportion of the range of services provided to industries and, to a lesser degree, to individuals. With a total of 21,000 firms in 1997, total earnings in this industry amounted to C\$6.5 billion; 0.25% of total revenues in Canada. For additional information on this sector of the industry, the reader is invited to consult Appendix I.

At present, output of the accounting services industry in the Canadian System of National Accounts (CSNA) is deflated using an index of average weekly earnings for persons working in this sector. The use of a price deflator based on average weekly earnings suffers from a number of drawbacks. For example, during times of recession, many firms may reduce the number of their less experienced staff (who are generally paid less), while keeping their more experienced staff (who are generally paid more). As a result, the average weekly earnings of the employees who remain may increase, thus pushing the price deflator upward. This increase may not be reflective of output price change if, at the same time, accounting offices are offering discounts to their clients in order to maintain market share. Conversely, during periods of growth, accounting offices may hire a larger number of junior professionals, which in turn may cause the average weekly earnings to drop while prices for accounting services may increase. In this case, the effect would be to underestimate the actual price increase. Also, the use of the average weekly earnings as a deflator presupposes that incidentals, profits going to associates, cost of capital, computers, structural investments and other costs move at the same rate throughout the economic cycles, which, is not the case. Finally, changes in average weekly earnings combine changes in productivity, changes in staff composition and changes in prices.

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<sup>1</sup> The methodology that has been adopted stems mainly from the French and Japan's experience for constructing price indexes for this sector.

The collection of output prices to build an annual producer price index for accounting services is proposed as an alternative to the use of the average weekly earning as a deflator. This proposal is a collaborative effort, which builds upon experiences of other countries.

Statistical agencies have used a variety of different methodologies in the construction of an index for accounting services. These methodologies range from model pricing to the use of variations in average amounts for all contracts (fee income method). The use of each of these methods is constrained by the frequency collection and availability of data. For example, one method where statistics are collected every three months may be inappropriate, while another is not feasible in a country where accounting firms are somewhat reluctant to co-operate. The primary objective is to identify a methodology that will offer the maximum number of potential benefits and that should improve the quality of the current deflator. The reader will find a description of other countries' experiences in Appendix III.

### **III. Types of Services**

An accounting service is defined as the activity of gathering, assembling, compiling and analysing financial information and communicating this information to interested parties. The information is used by clients in making economic decisions. Businesses providing accounting services may also offer insolvency and management consulting services.

For any given client, the primary output of the accounting industry is defined by an engagement letter (contract), which outlines the type of services to be performed. Detailed information related to the type of services that are offered by accounting firms, the negotiation process that takes place with clients and the process to deliver the output are explained in detail in Appendix II.

#### **Categories of services and sub-indices**

Five broad categories of services were selected for calculating a price index for accounting and related services. These categories include: audit, review and related services, other assurance services, bookkeeping and general accounting services, tax preparation services for corporate clients, tax preparation services for individuals and unincorporated businesses. By virtue of the one-time, non-repetitive nature of services such as bankruptcy, tax planning, consulting and other services, it was decided to exclude these services and to follow the evolution of the other types of services, which are becoming increasingly standardised. After discussions with associations and accounting firms, it has also become clear that a high proportion of contracts are relatively stable from year to year and that most clients remain with the same accounting firms.

The five main types of accounting services for which a price index is calculated are presented in Table 1 and have been defined in such a way for three main reasons:

- To simplify the breakdown of operating revenue from firms across the various categories of services. The number of categories for accounting services has been restricted to a few because it is easier to combine revenues than to create new category breakdowns;
- To obtain statistically significant price indexes, and to obtain a sufficient number of contracts for each service category. In the event that there would have been 25 service categories, firms would have had to select more than 10 representative contracts to cover all services. Increasing the number of contracts would have the effect of considerably increasing the burden placed on respondents;

- To avoid that a contract moves from one service category to another too readily from one period to another. Where there are a large number of service categories, a small change in the nature of the contract could mean a change in the service class to which it belongs. Where there are only a few service categories, only significant changes in services require a stoppage in the contract's coverage. In that case, the respondent would have to supply a substitute contract

The introduction of new services within the existing broad categories of service can occur only if respondents are able to track these new services over time. As a result, in order for a new service to be included in the index, it is necessary that the service be included in one of the categories under review, that it is repetitive and comparable (a similar contract with the same client for at least two successive years) and that it represents a substantial portion of the operating revenue of the company. The follow-up questionnaire will ask for those services which are discontinued to be replaced by similar services provided to similar clients. Quotes for the related services will be spliced together with an overlap period to form a continuous series.

**Table 1 - Classes of Services Provided by Firms in the Accounting Services Industry**

<b>Class of Service</b>	<b>Services Under Study</b>
A. Audit, review and related services	<b>X</b>
B. Other assurance services	<b>X</b>
C. Bookkeeping, compilation and general accounting services	<b>X</b>
D. Tax preparation services for corporate clients	<b>X</b>
E. Tax preparation services for individuals and unincorporated businesses	<b>X</b>
F. Other services	

## **IV. Pricing Methodology**

### **A. Methodology**

The methodology which is used is referred to as "*Actual Specification Contract Pricing*". This methodology relies on the measurement of actual prices for services that have been paid for by clients of accounting firms and similar to a large extent to that employed by "l'Institut National de la Statistique et des Etudes Economiques" (INSEE) [National Institute of Statistics and Economic Studies] and the Bank of Japan (BOJ). The reader is invited to look at Appendix III for an update on international approaches.

#### **1. Representative Contracts**

The accounting firms that are selected in this survey choose and report prices for contracts that are representative of the type of service they offer and represent a substantial proportion of the firm's revenue. In order to be able to follow these contracts from year to year, firms are supposed to submit contracts that are likely to be renewed in the years following the initial survey. The principle of stability of the services studied is important in order to minimise the adjustments due to changes in services or changes in quality.

#### **2. Price Variations**

The objective is to monitor price changes of contracts of the same quality and quantity of service over time. However, few contracts remain identical from year to year. For this reason, respondents are asked on the questionnaire (See Questionnaire.pdf) to indicate for each representative contract, how much of the price variation is due to a change in service and how much is due to a price change. At this stage there is no alternative but to rely on respondents in making this type of distinction.

#### **3. Number and Distribution of Contracts**

In order to simplify the survey while retaining a sufficiently broad selection of contracts by service category, each accounting office is asked to provide a maximum of 10 contracts. However, respondents are supposed to select a set of contracts that reflects the distribution of operating revenue by service category. This ensures that contracts in the categories that account for only a very small fraction of earnings are not considered. On the other hand, it should be noted that the distribution of the total number of contracts requested reflects earnings by service category rather than the nature or complexity of each contract within the same service category. All service categories should include complex contracts and for practical reasons it was decided to use the size of revenue as an indicator of how many contracts should be selected in each of the categories of services.

### **B. Limitations in the Methodology**

#### **1. Smoothing of the Index**

It is possible that price variations will be underestimated in the index for accounting services to the extent that these are built on stable contracts with long-standing clients. In periods when contracts are abundant, it is also possible that the price asked for new service contracts will be higher relative to previous periods when new clients were more difficult to come by. The pricing trends should reflect the law of supply and demand.



By following the variations in stable long-term contracts exclusively, it is possible that only a portion of price change is measured.

After consultation, the Canadian Institute of Chartered Accountants of Quebec has confirmed that a large percentage of contracts are relatively stable and that contracts are generally signed with the same clients. Generally speaking, accounting firms attract new clients with discounts for the initial consultations or for new contracts. Contract prices subsequently stabilise and increase gradually to reflect changes in the firm's costs. By becoming more repetitive and familiar, contracts require less work, which in turn facilitates changes in the composition of the staff who undertake the work. Under such conditions, the profit margin for the providers of accounting services may be expected to increase or the price charged to the client may be expected to decrease or both of the above could happen.

## 2. Other Problems

The construction of a price index on accounting services faces the same problems as other price indexes. It is impossible to incorporate new types of services until respondents are required to supply a new revenue distribution by category of services. This situation is very similar to a basket update. How frequently the new sample of services for the same respondent will be updated is a question that cannot be answered at present. It will depend to a large extent on how fast the industry is evolving.

As the data collection process continues from year to year, new contracts will be added to the pool of contracts originally selected by a firm when original contracts are no longer representative or expire. If possible, new contracts will be spliced in with an overlap period at the time the old contracts disappear.

## C. Mathematical Formulation

The most detailed price indexes are calculated by type of service  $i$ , ( $i = 1 \dots L$ ) by firm  $j$ , ( $j = 1 \dots n$ ), by region  $r$ , ( $r = 1 \dots N$ ) using the geometric mean of price relatives of contracts  $c$ , ( $c = 1 \dots k$ ):

$$P_{t/b}^{irj} = \left( \prod_{c=1}^k \frac{P_t^{irjc}}{P_b^{irjc}} \right)^{\frac{1}{k}} \quad (1)$$

Sub-aggregate price indexes by service  $i$ , and by region  $r$ , for all firms, are then calculated using weighted arithmetic means of the most detailed price indexes; the weights being equal to the ratio of the value  $w_b^{irj}$  of a service  $i$ , and a region  $r$ , by firm  $j$ , to the total value  $\sum_{j=1}^n w_b^{irj}$  of that service by region across all firms.

$$P_{t/b}^{ir} = \sum_{j=1}^n \left( \frac{w_b^{irj}}{\sum_{j=1}^n w_b^{irj}} * P_{t/b}^{irj} \right) \quad (2)$$

Aggregate price indexes by service  $i$  for all regions and for all firms are calculated using weighted arithmetic means of sub-aggregate price indexes, the weights being equal to the ratio of the value  $w_b^{ir}$  of a service  $i$ , by region  $r$ , for all firms to the total value  $\sum_{r=1}^N w_b^{ir}$  of that service for all firms and for all regions.

$$P_{t/b}^i = \sum_{r=1}^N \left( \frac{w_b^{ir}}{\sum_{r=1}^N w_b^{ir}} * P_{t/b}^{ir} \right) \text{ where } w_b^{ir} = \sum_{j=1}^n w_b^{irj} \quad (3)$$

Aggregate price indexes by region  $r$ , for all services and for all firms are calculated using weighted arithmetic means of sub-aggregate price indexes, the weights being equal to the ratio of the value  $w_b^{ir}$  of a region  $r$ , by service  $i$ , for all firms to the total value  $\sum_{i=1}^L w_b^{ir}$  of that region for all firms and for all services.

$$P_{t/b}^r = \sum_{i=1}^L \left( \frac{w_b^{ir}}{\sum_{i=1}^L w_b^{ir}} * P_{t/b}^{ir} \right) \text{ where } w_b^{ir} = \sum_{j=1}^n w_b^{irj} \quad (4)$$

The total price index for all services for all regions and for all firms can be derived from various sub-aggregates, either by region, or by service. The following formula shows the calculation across regions.

$$P_{t/b} = \sum_{r=1}^N \left( \frac{w_b^r}{\sum_{r=1}^N w_b^r} * P_{t/b}^{ir} \right) \text{ where } w_b^r = \sum_{i=1}^L \sum_{j=1}^n w_b^{irj} \quad (5)$$

The reader may find an example of the price index calculation in Appendix IV.

## **V. Sample Design**

This section describes the issues related to sampling and related problems.

### **A. Sample Frame**

Statistics Canada's Business Register provides access to the firms that can be sampled for data collection. This database consists of a comprehensive list of all statistical enterprises in a defined universe, and of a comprehensive list of their associated legal and production entities, classified into industrial categories based on principal business activities, and hierarchical relationships among these entities. It includes mailing addresses, telephone numbers and other contact information. It is currently updated with taxation information (i.e. income tax, goods and services tax and payroll deduction records submitted to Revenue Canada) and information obtained from Statistics Canada's current surveys.

### **B. Sampling and Stratification Variables**

#### **Industrial Classification**

It is possible to extract from the Business Register a list of business units or establishments for a given industry under the North American Industrial Classification System (NAICS). This selection by NAICS code ensures that firms whose principal business activity is related to "Accounting services, tax return preparation, bookkeeping and payroll services e.g. NAICS code=54121" are selected.

#### **Operating Revenue**

A selection is done based on the operating revenue of the office that may or may not belong to a large accounting firm. Offices which have annual revenue of less than \$50,000 are not chosen in the selection process to reduce response burden. Offices that have relatively high operating revenues within a region, have a very high probability of being selected and a low probability of being replaced by another respondent in the future. Sample rotation is planned as another mean to reduce response burden and would be introduced when needed.

## **VI. Survey Vehicles**

### **A. Methods Used to Secure Initial Sample Unit Co-operation**

A pilot survey has been launched in the province of Quebec with the co-operation of the Canadian Institute of Chartered Accountants of Quebec in the summer of 2000. This pilot survey, which covered thirty respondents selected randomly, validated the approach chosen for measuring price changes for accounting services. Following this experience, it was decided not to ask for total operating revenue on the questionnaire to increase response rate, as operating revenues by firm are available from the business register. Questionnaires are sent to accounting firms in May after fiscal year end and after tax preparations to increase response rate.

The Canadian Institute of Chartered Accountants of Quebec has been an important source of information for the development of the accounting price index. Its close links to the accounting services industry, stemming from its mandate to represent the industry in dealings with the government and other professional associations, the involvement on the association's board of chartered accountants specialising in a variety of sectors, and with a high level of knowledge of accounting services, and its involvement in the regulation of the profession, were all factors that contributed to getting this project under way efficiently and quickly. Furthermore, the Canadian Institute of Chartered Accountants of Quebec has demonstrated its support for the Statistics Canada project in a letter to potential respondents, which encouraged them to complete the survey questionnaire.

Before the pilot survey was launched, visits to three firms specialising in accounting services and in tax returns provided an opportunity for collecting comments on the questionnaire itself and on the respondent's guide. Additional comments were obtained during and after the pilot survey that allowed for the improvement of the questionnaire and for the reduction of the burden on respondents, while maintaining the quality of the information.

## ***B. Survey Vehicle Tools***

The marketing letter, the respondent's guide and the questionnaire were modified based on the results of the pilot survey. These documents are key elements in conducting a survey. They help respondents to understand how they should fill the questionnaire and help the respondent to report as accurate information as possible.

### **1. Marketing Letter (see [Marketing.pdf](#))**

The primary purpose of the marketing letter is to promote the proposed survey and to generate interest on the part of respondents in order to obtain their full co-operation. This letter sets out the objectives, benefits and possible uses of price indexes (e.g. contract escalation, corporate performance assessment, monitoring of purchase costs and the measurement of the economic performance of the industry under review).

### **2. Respondent's Guide (see [Guide.pdf](#))**

This guide incorporates a brief description of the accounting service categories under review

### **3. Questionnaire (see [Questionnaire.pdf](#))**

The questionnaire is the centrepiece of this data collection exercise. This mandatory survey gathers information under the Statistics Canada Act, 1985, Chapter S19. The questionnaire begins with an introduction covering the objectives of the survey, an assurance to the respondent regarding the confidentiality of the information obtained, instructions, examples, and advice.

## **VII. Publication Structure and Relationship to the Central Product Classification (CPC)**

### **A. Publication Structure**

The publication structure follows the level of detail of price indexes by category of service. First, plans to publish the results of the full survey when they are available, for a total price index for; auditing services, other assurances services, bookkeeping services and tax preparation services together for Canada and its regions. Second, sub-indexes will be published for each of the five categories of services at the national level and at the regional level if the number of respondents and the quality of the data permit.



#### **Category of Services :**

- a) Audit, review and related services
- b) Other assurance services
- c) Bookkeeping, compilation and general accounting services
- d) Tax preparation services for corporate clients
- e) Tax preparation services for individuals and unincorporated businesses

#### **Geographical Levels:**

National: Canada

Regional: Atlantic, Quebec, Ontario, Prairies, British Columbia and Territories

### **B. Relationship of Publication Structure to the CPC**

The classification structure of Statistics Canada's Services Division which runs a survey on accounting services industry is largely based on the CPC structure, which will also be the publication structure of the proposed accounting price index. This will allow to deflate operating revenue at a more detailed level of service category than the present deflator and hopefully will result in a better estimate of total production at constant prices for this sector.

Table 2 below shows the relationship between the CPC and the classification that has been developed for the price measurement of accounting services. There are however some differences in the way the classification is structured.

The first difference can be found in the category "Other accounting services" of the CPC, which includes: attestations, valuations, preparation services for pro forma statements, etc.... It is divided in two categories in the proposed structure, one that includes all other assurance services (published) and the other, which includes all other services (not calculated and not published). Another difference is the treatment of services that do not fit well with the chosen methodology. For example, representative contracts are not required for services that are not repetitive with the same client every year. Corporate tax planning and consulting services", "Individual tax planning services", "Insolvency and receivership", "Collection agency services" and "Other support services like Payroll services" fall under this category and are classified in "Other services".

**Table 2 - Comparison Between the Central Product and the Price Index Classifications**

Central Product Classification CPC Version 1.0	Price Report for Accounting Services (Prices Division—Statistics Canada)
822 Accounting services, financial auditing and Bookkeeping	
8221 Accounting services and financial auditing services	
82211 Financial auditing services	A. Audit, review and related services
82212 Accounting review services	
82213 Compilation of financial statements services	B. Other assurance services
82219 Other accounting services	C. Bookkeeping, compilation and general accounting services
8222 Bookkeeping services, except tax returns	
82220 Bookkeeping services, except tax returns	
823 Advisory services related to taxation	
82310 Corporate tax planning and consulting services	
82320 Corporate tax return preparation and review services	D. Tax preparation services for corporate clients
82330 <u>Individual tax preparation and planning</u> services	E. Tax preparation services for individuals and unincorporated businesses.
824 Insolvency and Receivership	
8240 Insolvency and Receivership	F. Other services
85 Support services	
85920 Collection agency services	
85990 Other support services : ...Payroll services	

Note : More detailed descriptions of the CPC and of our own classification (respondent's guide) are available in Appendix V.

## VIII. Conclusion

With over C\$6.5 billion of total earnings in Canada in 1997, the industry of auditing, accounting, tax returns and bookkeeping services contributes to the Canadian economy and provides services to businesses and individuals, which result in additional value added into the economy.

Until now, average weekly earnings for staff working in this sector has been used as a price deflator for estimating production at constant prices in the Canadian System of National Accounts. The proposed methodology for measuring price change over time for representative contracts will be an improvement over the present approach. Other countries such as Japan currently use this method of measuring prices, which presupposes a relative stability in the service which are provided to clients.

In the years to come, this dynamic sector of the economy may have to cope with expected mergers and changes in the type of services offered to meet clients' demands (further information can be found in Appendix VI). Therefore, new trends that are likely to influence the measure of price variation will have to

be monitored. Good communication between each of the major players (firms, associations and Statistic Canada) will ensure that price changes are measured correctly. Finally, results of the first survey cycle will help to validate our approach in measuring price changes for auditing, accounting, tax returns and bookkeeping services.

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## **Appendix I Business model**

### **A. Industry Organisation**

#### 1. Size of Industry

With a total of 21,000 firms in 1997, total earnings in this industry amounted to C\$6.5 billion. This amount constitutes 0.25% of total revenue in Canada for that year.

#### 2. Employment

The accounting services industry relies on a highly developed technological infrastructure in conducting its business. The fact remains that a high proportion of its assets resides in its employees. In 1997, this industry accounted directly for 86,000 jobs in Canada. These jobs represented 0.6% of all jobs in Canada and 1.8% of all jobs in the service sector. Of these jobs, 57% were in accounting offices, 32% in offices that specialised more in bookkeeping and 11% in offices specialising in tax returns. Offices that specialise in the preparation of tax returns operate with a greater number of part-time jobs, especially in the peak period prior to the deadline for tax returns between February and April.

#### 3. Distribution of Firms and the Structure of the Industry

At the time of the most recent survey on accounting services, Statistics Canada's Services Division indicated that the largest firms (\$10 million and over), accounted for 40% of total industry earnings in 1997. The total number of offices affiliated with these large firms accounted for only 3% of the total number of offices for the industry as a whole. This demonstrates the high level of concentration in this industry compared to other industries in the services sector.

Average earnings per office for the major firms were \$2 million in 1997, compared with \$300,000 for the small firms. Audit, accounting and tax returns accounted for 85% of the small firms' total operating revenues in 1997, whereas these same services represented only 69% of the earnings of the large firms.

Finally, the large accounting firms all have international affiliates. They form part of large multinationals with a wide range of expertise in a variety of fields and can draw on a worldwide network of assistance. This gives these large firms a comparative advantage over smaller firms. The smallest offices, on the other hand, use as a selling point with customers the merits of a personalised approach and are affiliated with independent professionals or firms that can offer complementary expertise. In this way, they can compete with the large firms and retain or expand their client base in the future.

#### 4. Structure of the Profession

There are currently three major designations for professional accountants in Canada. The first is the title of Chartered Accountant (CA), which covers over 66,000 professional accountants and 8,500 students in Canada. The second is the title of Certified General Accountant (CGA), which covers over 60,500 members and students enrolled in this professional studies program. The third is the title of Certified Management

Accountant (CMA), which covers 31,000 professional accountants and 12,000 students and candidates for the title of CMA.

In all cases, these titles are obtained from and conferred by national organisations, which in turn have their own provincial and territorial branches. The national organisations, in addition to their role of national and international representation, offer general advice in the area of internal regulation and control, look after the publication of professional documentation and develop training programs. These three associations are members of the International Federation of Accountants (IFAC).

The titles are earned through a combination of course work and specific examinations, a university degree and practical experience. CA candidates are more specialised in tax audit and fiscal matters, whereas CGAs take a more general approach, incorporating management principles. CMAs receive specialised training in management accounting.

The rules and the degree of participation in the overall set of accounting services depend very largely on the legislation and practices in each province and territory of Canada. This subject is reviewed in section C Governmental Regulation in this appendix.

One can find other general information on the structure of the accounting profession on the following internet addresses and in Appendix VII :

Chartered Accountants of Canada: [www.cica.ca](http://www.cica.ca)

Chartered Management Accountants of Canada: [www.cma-canada.org](http://www.cma-canada.org)

Certified General Accountants of Canada: [www.cga-canada.org](http://www.cga-canada.org)

International Federation of Accountants: [www.ifac.org](http://www.ifac.org)

## 5. Degree of Vertical and Horizontal Integration

There is no vertical integration in the accounting services industry in the true sense of the word. Accounting services are offered by accounting offices, which are highly concentrated. Each accounting office looks after all the stages of a contract, not leaving much room for subcontractors. As discussed in the previous section, accounting firms are deeply involved in each stage of the process leading to the final product. In fact, accounting firms should be looked upon more as multi-product structure firms or more as horizontally integrated firms. Large offices offer a wide variety of services that respond to their client's needs and demands while smaller offices in the regions may delegate part of their service to a central office. Finally, small offices not associated with bigger firms count more on outsourcing or other kinds of associations to be able to offer a large range of services as requested by their clients.

## 6. Outsourcing/Resellers

Small offices that belong to larger firms sometimes use outsourcing. If it is a peak period or if a particular office does not usually provide the service, the office may subcontract other offices through their internal network. If so, the office will be charged the same way as if the work had been done outside the firm. Usually, bigger firms have the entire infrastructure to meet all the needs of their offices that are around the country. In certain cases, they can even subcontract abroad, in the case where a client wants to export or is involved with foreign partners.

All other small offices that do not operate under the umbrella of big firms do outsourcing in certain circumstances. This outsourcing can be related to accounting, but usually it is used to complete the range of services that they offer to their client. This can help to compete with other big firms, which have access to all kinds of specialists inside the office or through their internal network as discussed in the previous paragraph.

Further, outsourcing is more common for firms doing tax work. In fact, there are a large number of individuals who work on a part-time basis between January and April in companies that specialise in tax returns (almost 9,000 jobs in 1997). This peak period necessitates the hiring of individuals on fixed contracts.

There is no reselling of services in this sector.

## 7. Array of Services Provided

The bigger accounting firms offer a fairly large variety of services that go well beyond the regular accountant's work. In 1997, 31% of their revenue was earned from sales of services such as management consultations. All types of management consulting and support, system consulting and personal management operations are becoming more and more popular. They also offer a variety of total business solutions for their clients. They are building alliances with non-accounting firms to offer more diversified services to their clients. Auditing is becoming more and more of an entry door that leads to a wide array of services and which helps the client to be more and more competitive.

Smaller firms, are more specialised in regular accounting services such as auditing, accounting and tax returns; other services contributed only 15% of their total operating revenue in 1997. Building alliances with other firms and doing outsourcing help them offer other kinds of services.

### ***B. Record Centre Identification and Identification of Operating Units Comprising the Sample Unit***

There are two kinds of information that are needed in building a price index for accounting services:

- Revenue (total and distributed by category of services)
- Contract information (price, service provided and other details)

The total revenue figure is usually available at the establishment level and higher structural levels of the firm. Distribution of this revenue by category of service may only be available at the business unit level (establishment). All depends on the level of information available at different levels of the organisation.

The contract or the engagement letter is the centrepiece of the information in the accounting services industry. Prices associated with a chosen contract are followed through time. Revenues of the establishment are the other component that goes into the calculation of the index. Usually, each contract is well identified (Identification number) in the firm's filing system.

Depending on the size of the business unit, these two types of information may not be available at the establishment level. In the case of smaller firms (independent offices or self-employed workers), the establishment, which is the operational unit, is situated in one location. It is easy to get access to the data on revenue and on prices for different contracts or engagement letters. Respondents have access to all explanations related to changes in the service they provide or to changes in the price they ask for the service. Usually, the small number of partners working in those firms makes it easy to choose representative contracts for the whole office and it is simple at the same time to get information about these contracts.

Bigger firms have a head office and smaller offices all over the country. In this case the record centre identification will be the establishment (offices). Depending on the structural organisation of the firm, in some cases, all the information about total revenue for a particular office and even all the details concerning contracts are well centralised at the head office. On the other hand, the head office knows the total revenue for a particular office and may only give certain guidelines or thresholds concerning billing structure. In this case, the head office has no detail about contracts and therefore, questionnaires should be sent directly to each of the selected offices.

### **C. Government Regulation**

The only accounting services that are regulated in Canada are those associated with public accounting. This includes audits, review engagements, as well as any service that involves independent examination of records for the purpose of expressing an opinion as to whether the financial information is presented fairly. These services are regulated in seven provinces and unregulated in three provinces: Saskatchewan, Manitoba and New Brunswick.

In Ontario, Quebec and Nova Scotia, audit and review services are usually performed by holders of the CA designation; in British Columbia and Prince Edward Island, CAs and CGAs are authorised to perform audit and review services for companies; in Alberta and Newfoundland, holders of either the CA, CGA or CMA designation are authorised to perform audit and review services.

Public sector auditing is also controlled in most provinces. All provinces have a legislative auditor (sometimes called the Provincial Auditor), while at the federal level there is the Auditor General of Canada. The provincial legislative auditors and the Auditor General all have their own enabling legislation. Government departments and most Crown corporations are audited by the appropriate legislative auditor. Public sector entities allowed to choose their own auditors that would be required to comply with existing legislation in their jurisdiction. Thus, they would be subject to that legislation wherever auditing is regulated.

In the insolvency field, trustees in bankruptcy require a licence from the federal government. Most trustees are members of a self-regulating professional body, the Canadian Insolvency Practitioners Association (CIPA), but membership is not mandatory. In the field of tax representation, any activity regarded as practising law is regulated by the relevant statutes. Each province regulates the practice of law. Investment advisors, personal financial planners, and stockbrokers are also regulated in some provinces.

In provinces where public accounting is regulated by statute, only a few require practitioners to have a licence. All CAs who practice public accounting must be members of the Provincial Institute of Chartered Accountants (PICA) of the province in which they are practising. CMAs offering services to the public must be registered as public practising members. Newfoundland, Nova Scotia, and Ontario require a licence to

practice public accounting. In Prince Edward Island, Quebec, Ontario, Alberta and British Columbia, public accountants must be members of one of the provincial associations that are authorised to offer accounting services to the public.

Several provinces require subscription to professional liability insurance. In all provinces but for Prince Edward Island, CAs in public practice are required to have professional liability insurance. CGAs in all provinces are required to carry professional liability insurance and CMAs in public practice must have professional liability insurance. In addition, all CGAs and CAs in Nova Scotia and Ontario must take an oath.

#### ***D. Public Ownership/Government Subsidisation***

In Canada, accounting firms are not incorporated. Therefore, no firm is publicly owned or traded on the stock exchange market. On the other hand, firms that are specialised in tax return or payroll services such as H&R Block are allowed to be registered on the stock exchange market.

To our knowledge, there are no governmentally subsidised firms.

## Appendix II Types of Services

The following table includes the type of information related to the service, the nature of the involvement of the accountant, the level of responsibility including the link to the Canadian Institute of Chartered Accountants (CICA) manual, and the reports that will be delivered to the clients to fulfil the terms of engagement letter.

### Manual of the Canadian Institute of Chartered Accountants page 5031 paragraph 520.B

Type of information	Nature of the involvement	Professional responsibilities	
		Work: The service provider discharges his/her responsibilities through compliance with the recommendations in the following chapters	Report
Financial statements	Audit	Chapter 5100, generally accepted audit standards	Auditor's Report: Standard report Chapter 5400
Financial statements	Review	Chapter 8100, general review standards or chapter 8200, review of financial statements	See the general review standards in Chapter 8100 and Chapter 8200
Financial statements	Compilation	Chapter 9200, compilation exercises	Chapter 9200, compilation exercises
Information used in a certification exercise	Certification	Chapter 5025, standards relative to the certification exercise	Chapter 5025, standards relative to the certification exercise
Annual Report containing audited financial statements	Check whether the financial statements and the relevant Auditor's Report are reproduced accurately in the Annual Report.  Read the other information in the Annual Report and see whether it is consistent with the audited financial statements.	The auditor is already associated with the financial statements through the previous audit exercise and must discharge his/her responsibilities in accordance with the recommendations of Chapter 7500, the auditor's responsibilities with regard to the Annual Report.	No standards regarding the report (see paragraph 5020.10)
Tax return and financial statements attached to it	Preparation of the tax return (financial statements prepared by the client)	The accountant is associated with the tax return by preparing it, but his/her professional liability is limited to that of his/her provincial organisation (competence and due diligence in carrying out the work)	No standards regarding the report. Please see 5020.10.

## Process to Deliver the Output

An engagement letter is used as a basis for transactions between an accounting firm and its clients. An engagement letter indicates the type of service the client is contracting for, when the service is to be provided, a list of work limitations for both parties and an indication of the terms of billings and payments. The accounting firm and its client negotiate the terms of an engagement letter. The negotiations may include interviews, research and travel to ensure the contract is feasible. The letter summarises the mutual understanding and responsibilities of parties.

Accounting firms follow these steps in providing services to the clients:

- Evaluation of the client:
  - Review documents like financial statements and tax returns
  - Communicate with former auditors
  - Communicate with present and former accountants of the client
  - Determine the adequacy of the client's records
- Negotiations with the client to arrive at an engagement letter regarding the terms of engagement:
  - Description of the work that should be accomplished
  - Time frame
  - Billing structure
  - Responsibilities and limitations
- Engagement settlement
- Plan to achieve the objectives and goals:
  - Get full understanding of the client's environment (operations, business and industry)
  - Determine the nature, the extent and the timing of procedures
- Obtain and document all data needed to fulfil the engagement
- Evaluation of the collected data and collected documents
- Preparation of the letters required in the engagement letter
- Review of the engagement to provide reasonable assurance that goals and objectives have been achieved
- Communication of results to the client

## **Appendix III Price Indexes on Accounting Services - International Perspectives**

### ***International approaches:***

#### **A. Australia**

##### **1. Business model**

The accounting industry is dominated by small firms employing less than five people. Large firms however account for the majority of the industry revenue. As a whole, accounting firms derive most of their revenue from tax services. The medium and large firms derive most of their revenue from compliance work. In the larger firms there is generally no cross-staffing between services, where each service has its separate division, budget, and staff. Cross staffing becomes more common with a decrease in firm size, however this should have no impact on pricing.

The boundaries between accounting and other business services are blurred and changing. Many routine services provided by accountants are likely to be provided in future by other professionals such as bookkeepers and investment advisers, but accountants are likely to provide services usually undertaken by lawyers. The basket of services offered must be tracked over time to reflect real price change and provide proper weights.

Recently, bigger suburban accounting firms have found they can compete with the major firms for large jobs, by drawing on cost-effective technology and their relationships with specialist firms in other areas. This can be attributed to improvements in information and communications technology, which allow accounting firms to draw clients from farther locations. Also, cheaper computer packages mean that businesses can do more basic accounting themselves, causing accounting firms to expand services to include management accounting and business advice. This allows them to cater to a wider range of client needs. The large overheads which the major firms are subjected to, means the smaller firms have a competitive price advantage in some instances.

##### **2. Government regulation**

The Australian accounting industry is not bound by government regulation. No set scale of fees is currently used by accounting firms or associations. The scale of fees were removed in 1973, due to the 1974 Trade Practices Act which meant that the scale of fees could be unlawful under the act, and to the increasing impracticality and costs of developing a relevant scale within an environment of increasing goods and service prices. Present rules relating to fees are in the form of guidelines and prescriptive provisions set by industry associations. None of these provisions relate to the actual level of fees.

Services are generally bundled and priced under one contract. However there are some services which may not be provided under a formal written contract, and within a contract there may be some degree of services provided without charge.



### 3. Pricing methodology

There are five service categories represented by this index:

- taxation
- general business/ personal accounting
- auditing services
- insolvency and reconstruction
- other.

Based on overseas experience, the ABS considers that there are two general approaches that can be taken to pricing this industry: model contract pricing and hourly rate pricing.

The chosen pricing method uses a combination of the above approaches. Prices collected are the average monthly-realised rate per service. The selected month is the middle month of the respective quarter. The information required is the staff levels involved in providing the given service, total billable hours, charge-out rates for each level of staff, and the realisation rate for that service division. The three latter quantities are multiplied together to give the total monthly average charges for the particular staff level for a particular transaction.

This method has the advantage that all the necessary data is generally readily available from the firms. Where rates vary within a staff level for the same service, a weighted average is used in quoting the hourly charge-out rate for that staff level. However changes in productivity are not accounted for, such as the event where two tasks are performed in the time it previously took to perform one, with no effective change in service. It is therefore necessary to review productivity annually and factor this into the index calculation.

The index structure is an index by type of service to maintain some consistency in the prices. It is likely the prices will trend differently between services over time since some services will have different pricing structures or larger discounts than others.

### 4. Limitations/concerns with published data

Most firms agree that the pricing model of staff level, times the charge-out rates, times the hours billed, times the recovery rate is an appropriate model for their services, however some firms keep no detailed data on staff levels. In many cases real price change can still be measured using other information (e.g., monitoring contracts), which has to be identified on a case by case basis.

Many smaller firms do not have detailed contracts or have no contracts, and not all transactions in general have written contracts. Transaction details might be listed elsewhere such as in other agreements or billing invoices. In many accounting firms there are also provisions of extra services for free, which must be identified and valued.

The factors incorporated in realisation rates and how they are calculated must be assessed for each firm, since they will not necessarily be the same.

Quality changes are problematic to capture and measure. In firms that use a fixed fee instead of time-charge rates, the service may be priced based on its quality as tailored to that application, in which case there may be quite a price variation within the type of service since no two transactions are the same. This causes difficulties in comparing price movements over time. Productivity changes, mainly due to better administration or technology, are also difficult to define and measure.

#### 5. Analysis of "goodness" of published data

To date, respondents have not been able to provide any measures of changes in labour or technology productivity. This has therefore limited the capability of adjusting the price index for quality changes due to the effects of productivity on price movements.

There have been some timing issues arise, where staff timesheets within an accounting firm are not submitted until the next quarter. Adjustments to data have been required to be undertaken when these circumstances arise.

There are currently moves by some firms towards a change in pricing methodology. Possible future changes in pricing include value billing (where the firm receives a fixed percentage of the value-added price resulting from their service) and yield based (cost plus) billing. In the future the pricing methodology may have to be changed.

### **B. Canada**

#### 1. Business model

With a total of 21,000 firms in 1997, this industry relies on a highly developed technological infrastructure in conducting its business while relying heavily on its employees. In 1997, this industry accounted directly for 86,000 jobs in Canada. Of these 86,000 jobs, 57% were in accounting offices, 32% in offices that specialised in bookkeeping and 11% in offices specialising in tax returns.

The largest firms (\$10 million and over), accounted for 40% of total industry earnings in 1997. The total number of offices affiliated with these large firms accounted for only 3% of the total number of offices for the industry as a whole. This demonstrates the high level of concentration in this industry compared to other industries in the services sector.

Audit, accounting and tax returns accounted for 85% of the small firms' total operating revenues in 1997, whereas these same services represented only 69% of the earnings of the large firms.

Finally, the large accounting firms all have international affiliates. They form part of large multinationals with a wide range of expertise in a variety of fields and can draw on a worldwide network of assistance. This gives these large firms a comparative advantage over smaller firms. The smallest offices, on the other hand, use as a selling point with customers the merits of a personalised approach and are affiliated with independent professionals or firms that can offer complementary expertise. In this way, they can compete with the large firms and retain or expand their client base in the future.

The bigger accounting firms offer a fairly large variety of services that go well beyond the regular accountant's work. In 1997, 31% of their revenue was earned from sales of services such as management consultations. All types of management consulting and support, system consulting and personal management operations are becoming more and more popular. They also offer a variety of total business solutions for their clients. They are building alliances with non-accounting firms to offer more diversified services to their clients. Auditing is becoming more and more of an entry door that leads to a wide array of services and which helps the client to be more and more competitive.

Smaller firms, are more specialised in regular accounting services such as auditing, accounting and tax returns; other services contributed only 15% of their total operating revenue in 1997. Building alliances with other firms and doing outsourcing help them offer other kinds of services.

Additional information on the Business Model can be found in Appendix I.

## 2. Government regulation

The only accounting services that are regulated in Canada are those associated with public accounting. This includes audits, review engagements, as well as any service that involves independent examination of records for the purpose of expressing an opinion as to whether the financial information is presented fairly. These services are regulated in seven provinces and unregulated in three provinces: Saskatchewan, Manitoba and New Brunswick.

In all provinces of Canada, holders of the CA designation are authorised to perform audit and review services, While in some provinces, holders of the CGAs and CMAs are also authorised to perform audit and review services.

Public sector auditing is also controlled in most provinces. All provinces have a legislative auditor (sometimes called the Provincial Auditor), while at the federal level there is the Auditor General of Canada.

Additional information on the Government regulation can be found in Appendix I-C.

## 3. Pricing methodology

The methodology referred to as the "*Actual Specification Contract Pricing*" is used for the pricing of accounting services. This methodology relies on the measurement of actual prices for services or contracts that have been paid for by clients of accounting firms.

The accounting firms, that are selected in this survey, choose and report prices for contracts which are representative of the type of service they offer, which represent a substantial proportion of the firm's revenue and which should be stable from period to period.

The objective for choosing this methodology is to monitor price changes of contracts of the same quality and of the same quantity from the base situation to the comparison situation. However, because few contracts remain identical from year to year, respondents are required to differentiate in these representative contracts, how much of the price variation is attributable to a change in service and how much is attributable to a price change.

In order to simplify the survey while retaining a sufficiently broad selection of contracts by service category, each accounting office is supposed to provide a maximum of 10 contracts that reflect the distribution of operating revenue by service category.

At the most detailed level (at the level of the firm and for a class of service), the price index is calculated based on the geometric mean of price relatives:

Price index aggregates by class of services and by regions are then calculated using weighted arithmetic means, the weights being equal to the ratio of the value of a service and a region, by firm, to the total value of that service across all firms, by region. Similarly, price index aggregates by service for all regions and for all firms are calculated using weighted arithmetic means, the weights being equal to the ratio of the value of a service, by region for all firms by region to the total value of that service across all firms and for all regions.

Finally, the total price index for all services for Canada as a whole can be derived from various sub aggregates, either by region, or by service.

Additional information on the pricing methodology can be found in Section IV-A and IV-C of this paper.

#### 4. Limitations/concerns with published data

It is possible that price variations will be underestimated to the extent that these are built on stable contracts with long-standing clients. In periods when contracts are abundant, it is also possible that the price asked for new service contracts will be higher relative to previous periods when new clients are more difficult to come by. The pricing trends should reflect the law of supply and demand. By following the variations in stable long-term contracts exclusively, it is possible that only a portion of price changes is measured.

It is the respondents responsibility to decide how the contracts they choose are representative and to make the distinction between a price and a service change. Additional information on this topic can be found in Section IV-B of this paper.

#### 5. Analysis of "goodness" of published data

Since this is only a preview of the index and that it will be its first year of publication, a lot of work is underway and still has to be done before it can be judged to be a "good" index.

A preliminary number is available for Canada for 2000 at the end of this appendix.

### **C. France**

#### 1. Business Model

In 1997, this sector accounted for 15,740 companies of which less than one hundred employed more than 100 paid workers. The 12,800 offices of less than 10 paid workers carried out about 35% of the total turnover of the sector. A large number of companies can be considered to be small firms or offices and a very small number of firms are considered large firms and account for a big share of the total turnover.

Every company must designate an auditor. An auditor who works in a company as a chartered accountant cannot be designated as an auditor for the same company. The billing for services rendered by the auditor is regulated and is established as a function of the operating revenues of the firm which is being audited. The rates are public and allow for a quota of hours to be worked for each operating revenues bracket.

## 2. Government Regulations

Chartered accountants work under the administrative supervision of the Department of Economy, Finance and Industry. Auditors work under the administrative supervision of the Department of Justice and are registered in a Court of Appeal. Auditors all are chartered accountants.

## 3. Pricing Methodology

The French Survey on Prices for Accounting Activities started in 1996. In 1996, 103 companies were selected and they were asked to supply three years of data retrospectively. By the end of 2000, 92 were still part of the survey.

The following categories are surveyed:

Bookkeeping of annual statements (41%),  
Monitoring of the accounts (24%),  
Audit of small and medium-sized businesses (20%),  
Audit of large companies (6%),  
Other different services (tax consultation, social pay and declarations) (9%).

Weights for these services are calculated according to the revenue of each category of services compared to the revenues of all services for the companies taking part in the survey.

The number of contracts monitored by company is between 12 and 20. For each contract, the survey asks for the actual number of hours spent on the contract, for the corresponding fixed rate invoicing based on hourly rates and for the amount, which is actually charged to the client, real invoicing. Invoicing according to the actual number of hours spent on a contract would usually be different from real invoicing which corresponds to the number of hours actually billed and which is the result of negotiations between the accounting office and the client.

The nature of a contract, fixed rate invoicing vs real invoicing, may change through time and the survey results may give some indication to that effect. For example, if the real invoicing seems to be stable and if the number of hours spent is increasing, it is clear that it is still a fixed price type contract. On the other hand, if the change in the real invoice price is proportional to the change in time spent, it is now considered an invoice according to time spent. Concerning the operational practice and the price change, if there is no variation or hardly any in the value of invoices between two years, there is no call back to the respondents. The price is then calculated by deduction from the real invoicing and the number of billed hours.

When the variation is significant, a contact with the company is necessary.

- If the contract has changed in terms of content, it is necessary to separate the quality effect from the price effect;
- if the type of invoicing has changed; it is necessary to confirm with the respondent.

In the case where the variation is significant, the information provided on the invoice on the hourly rate helps to identify changes in the type of invoicing. This information is not essential, and its deletion is planned in order to simplify the survey.

When the recorded price changes are higher or lower than 5%, the company is contacted to find out why there is such a variation. The objective then is to differentiate between what is related to a modification of the service (exceptional filing of document, change in the qualification or experience of the person managing the bookkeeping) and what is a price modification. Most of the time, telephone contact with the company makes it possible to resolve this issue. Only then will the true variation of prices be reflected in the variation of the index, which in turn could be compared to a variation according to "experts".

#### 4. Limitations/concerns with published data

Difficulty to distinguish between type of contract: fixed fee type or time charged rates

If time spent on a contract is varying too much, it may change to a contract based on time spent for a certain period of time or for the entire remaining period. Outside pressures from the market may play a major role on the time that it is really charged to the client. Composition of the staff working on contracts is not collected in the survey. Thus a change in hours spent on a specific contract may be just a change attributable to the composition of the staff working on the contract and which may be associated with different hourly rates.

#### Disadvantages of an Annual Survey with a Set Date

The periodicity of the survey is annual and respondents have difficulties to remember the previous survey cycle questionnaire that discourages them to answer quickly. The rate of response before follow-up is low.

The deadline for response is also extended for about half of the surveyed offices that have closing dates of accounts different than December 31<sup>st</sup> and that cannot supply information until the accounts are closed.

#### 5. Analysis of "goodness" of published data

The information which has been collected since 1995 constitutes a basis for reflecting on the improvement of the methodology for the follow up of prices. The survey should continue to be an annual survey, and other billing methods should be considered to reduce a number of concerns as discussed before.

## **D. Japan:**

### 1. Business model

Accounting industry is divided into two categories. The first one provides services related to accounting records, such as audit. There are about 3,600 organisations, which have a 10% share in terms of the number of organisations in this industry.<sup>2</sup> The second category provides services related to tax reports. It includes the rest of the organisations, which is about 29,600. Most of the organisations in this industry are small size private firms with five employees on average. Only one percent of them is incorporated, such as large-scale audit corporations.

Services related to accounting services are only provided by certified public accountants who provide audit and attestation of accounting services (e.g., balance sheet, profit and loss statement). They cover reviewing services of accounting services and other financial statements. Further, they research, plan and consult in the field of accounting.

The services related to tax reports are mainly provided by licensed tax accountants.<sup>3</sup> They cover preparing and reviewing services of tax returns, bookkeeping services, corporate tax planning and consulting services, and other advisory and representation services related to taxation.

Small size organisations in this industry seem to be specialised in providing accounting services. On the other hand, relatively large-scale private firms or corporations seem to provide not only accounting services but also other services classified into other industries system consulting, and personnel management consulting.

### 2. Government regulation

All entrants to the accounting industry are required to obtain a license issued by the government. Certified public accountants, licensed tax accountants and attorneys are only allowed to provide accounting services. The law defines the range of services for each license.

There are no regulations in fees of accounting services.

### 3. Pricing methodology

Two items of accounting services are compiled in the Corporate Service Price Index (CSPI);<sup>4</sup> the “certified public accountant services” and the “licensed tax accountant services.” They are classified by type of services, not by industry.<sup>5</sup>

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<sup>2</sup> The numbers cited in this paper are from the latest survey "1999 survey on service industries" released on November 2000, compiled by the Statistics Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications (MPHPT).

<sup>3</sup> Certified public accountants and attorneys are also allowed to provide the services related to tax reports by the government.

<sup>4</sup> “Item” is the lowest index aggregation level, which is published, of the CSPI.

Actual transaction prices are surveyed to compile the index for each item (i.e., certified public accountant services and licensed tax accountant services).

Certified public accountant services are covered using monthly or annual fee for auditing and attestations of annual accounting records with specified clients from the same accountants to fix quality of services.

Licensed tax accountant services include two types of services. The first one is fee for services, which combine bookkeeping with a set of preparation and review of tax returns. The second is a monthly fee for advisory services. Both types of services are surveyed with specified clients from the same accountants to fix quality of services.

#### 4. Limitations/concerns with published data

There might be a concern about coverage of price data. An insufficient number of price quotes might not reflect the representative price movement, because there are so many accountants and each contract with a client is different. It is impossible to grasp all of the contracts because of reporters' burden and insufficient human resources.

However, the sample size of price data was increased as much as possible in order to lessen the distortion caused by collecting a small number of samples. At present, the marginal return for increasing the number of price data, to improve accuracy of the index in this area, seems to be lower than for the other industries.

Another concern would be a matter of specification to fix quality of surveyed services. Quality of services is fixed by keeping fixed the types of services, the types of clients, and the types of accountants in charge of the services. However, skill of accountants will improve with experience in daily duties. This means that quality of services will change, although we fix the types of services provided by the same accountant for the specified clients. In other words, at present we are not controlling the quality of price data in terms of the level of accountant's skill.

It is difficult to estimate quality changes caused by the improvement of accountant's skill. There are some ideas to estimate quality changes, which do not seem to work on practice. Using accountants' years of experience for estimating the quality change is one idea. But it is substantially difficult to figure out accurately quality change with the years of experience. First of all, a pace of improvement might be different depending on each accountant and years of experience. Secondly, the accountant's skill would improve not only with the years of experience but also with other factors, such as the accountant's own effort. This means that changes in marginal cost measured by labour input may not be equal to quality changes. Using a degree of user's satisfaction for estimating the quality change is another idea. However no tool exists to

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<sup>5</sup> The CSPI adopts the classification system based on types of services. In the classification system, outputs of each company are categorised by the types of services. It is different from the industry classification system, in which outputs are categorised by the major output of each company. In the industry classification system, all outputs of each company are counted to one industry, although its minor output is quite different from the output of the industry in which the company is categorised.

Therefore, the item of licensed tax accountant services in the CSPI, for example, only includes services related to tax reports. The item does not cover all services provided by the licensed tax accountant, who can provide not only services related to tax reports but also other field of services, which are not categorised in the accounting industry.



estimate each user's satisfaction so far. User's satisfaction also depends on the preference of clients, even if they obtain the same services from the same accountants.

## 5. Analysis of "goodness" of published data

The index of accounting services has been compiled for over 15 years from January 1985. Its trend is upward except for four years from 1994 through 1997. It is difficult to analyse its "goodness," because of a lack of comparable service statistics in Japan.

However, it is recognised that the index is generally acceptable when compared with Japan's economic situation. For example, the index, until the end of 1993, seems to be in line with the change of business cycle. The increasing trend of the year-to-year changes in the index during the so-called "bubble" period seems to change when the economy turned into a recession in 1991. It began to decrease in 1991. Since mid 1990's, the demand for certified public accountant services seems to have increased to cope with worldwide changes in accounting system.

## ***E. New Zealand***

### 1. Business Model

There are about 3,000 geographic units providing accounting services in New Zealand. Most of these are relatively small, with many being sole proprietors. The five large firms, which have international links, take a large share of major corporate business.

The relevant ANZSIC class is 7842, Accounting Services.

### 2. Government regulation

The only legal requirements relate to accounting standards and standards for auditing. The Companies Act imposes requirements for reporting by companies. The Stock Exchange places reporting requirements on listed companies. The Inland Revenue Department imposes standards that must be complied with for various tax returns. The Institute of Chartered Accountants imposes training requirements on its members.

There are no government regulations with regard to fees charged for accounting services.

### 3. Pricing methodology

Price change is measured by surveying the charge-out rates of Accountants for three broad categories of services. These are:

- bookkeeping,
- auditing,
- corporate advisory services.

Information obtained from several accounting firms was used to calculate the relative weights for these three categories. These breakdowns and estimates have been utilised in assignation of weights to individual items to price within this representative Commodity Index.

Prices are collected for both Intermediate and Senior Accountants from a wide range of firms throughout New Zealand. The questionnaire specifies for each charge-out rate

- The title of the position,
- The qualifications required,
- The number of years experience

For example

- Auditor
- B.Com,
- 5 years experience

Prices are surveyed quarterly from a sample of accounting firms. The sample includes a mix of small, medium, and large size accounting practices.

#### 4. Limitations/concerns with published data

The main benefit of survey charge-out rates is that they are relatively easy to measure in a postal survey. However, they may not always fully capture the fees being charged for accountancy services. For some services, a fixed fee is charged regardless of the time that the task takes.

The method does not take into consideration changes in the quality of services provided by accountants. Improved training may have increased the quality of services that an accountant with five years experience may provide in an hour. Changes in reporting standards may have increased the size of some tasks. Advanced information technology may have changed the way that accountants work or the mix of skill and experience that will be required for a particular service. Measuring charge-out rates may not account for these quality changes correctly.

## ***F. The United Kingdom***

### 1. Business model

There is a total of about 15,000 active businesses for which the "Big five" account for around 30% of the industry turnover. In fact, the industry can be conveniently divided into three segments: The big five, followed by the "Middle rankers", and a large number of small firms.

For the "Big five", in 1993-1994, around 40% of turnover was derived from accountancy/auditing, about 25% from tax consultancy, about 10% from insolvency and about 25% from other work like management consulting. The vast bulk of fee income is derived from business customers and a relatively small share is obtained from work in other countries. Charging is almost uniformly determined on the basis of fees for contracts, usually of a one-off nature. The most common method of charging is for the number of hours

required for each grade of staff to complete a job to be established, charge-out rates to be applied, and a total sum to be identified. However, the figure actually charged is, rarely equal to this sum. Discounts will be applied, depending on the nature of the customer, and, most critically, on the overall state of the market. Some contracts are carried out under "lump-sum" arrangements. Finally there is an annual cycle to workloads, as client's results are all produced to a similar timetable. There are few continuing contracts outside bookkeeping.

## 2. Government regulation

Anyone can describe himself or herself as an accountant. However, most accountants are members of either the Institute of Chartered Accountants (ICA), or the Chartered Association of Certified Accountants (ACCA). The larger firms are generally registered with the ICA (or more accurately, with one of the three ICAs covering England and Wales, Scotland, and Ireland).

## 3. Pricing methodology

### Fee Income Method

This aggregate method was the first one used by the Central Statistical Office (CSO). It required the collection of the total amounts and hours billed for each of the major categories of activity studied. For each category of activity, the total amount billed is divided by the number of hours billed. The result is an average hourly fee for the major categories of activity. The price index is thus obtained by calculating the relationship between the average fee of the current period to the base period. This method is inexpensive for the respondent.

### Model Pricing

This methodology, which is used for the smaller firms, is based on the estimate of a total price for a representative contract. In the case of the United Kingdom, this approach requires a quarterly compilation of prices for a wide range of services, such as audit, bookkeeping, tax consultation, bankruptcy, financial consultation and other types of consultation.

A contract is selected for the base year on the basis of one contract per primary activity. In the model pricing approach, this real or hypothetical contract is to be re-evaluated in subsequent periods to the base period. In principle, this re-evaluation is supposed to take market conditions into account and is supposed to reflect what the service provider would bill his client if he had provided the same type of service as in the base period. The re-evaluation of an identical contract through time makes it possible to identify variations in prices only, which is the main advantage of this method. The cumbersome nature and the difficulties inherent in this approach led index developers in the United Kingdom to select an alternative method to model pricing for larger firms referred to as the Fee income method by professional grade of workers.

### Fee Income Method by Professional Grades of Workers

This is the most recent method used by the CSO in the United Kingdom in collecting prices from large firms. These offices submit aggregated data for each professional grade of workers and for each of the major categories of service in the study.

In the base period these data include, for all professional grades and for all categories of service: the total amount billed, the total number of hours billed and the total hourly average billed. For subsequent periods, respondents are asked for the average hourly fee billed in the current period for each category. This fee is subsequently multiplied by the number of hours billed in the base period. Price change is measured by dividing the total hypothetical amount billed in the current period index by the total amount billed in the base period. The weights applied to the basic services are taken from the distribution of the total amount billed for each of the professional grades and the major categories of service in the base period.

Thus, the distribution of work between professional grades and the intensity of the work remain identical to that observed during the base period (Laspeyres). The aggregates for the base period become, so to speak, a contract (or distribution of work) model which is reassessed for subsequent periods.

This method constitutes an improvement over the "Fee Income" method, since it takes into account cost variations for the various professional grades. Furthermore, the time required to obtain the data is much shorter than for the "Model Pricing" approach.

Unfortunately, this method cannot take into account changes in productivity nor changes in staff composition in completing an actual contract.

#### 4. Limitations/concerns with published data

##### Fee Income Method

This method does not reflect changes in the composition of the staff doing the work, nor does it reflect changes in the volume of work performed or changes in worker productivity<sup>6</sup>. In fact, the calculated index was highly volatile and it led to the use of the model pricing approach.

##### Model Pricing

The model pricing approach does not, in practice, allow for the impact of negotiations with the client. By analogy, model pricing would give a catalogue price rather than a negotiated price. It is common knowledge that negotiations between service providers and their clients frequently result in discounts on the total value of the contract. Experience, in fact, shows that respondents frequently use standard rates or try to estimate a discount price. As Dave Watts states in his article<sup>7</sup>: "Market conditions may not be reflected in the price indices obtained".

One further disadvantage of this methodology is the amount of time that the respondent must spend estimating a price for the representative contract during each survey period. The respondent must rework all cost calculations in order to arrive at an overall price for the selected contract<sup>8</sup>.

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<sup>6</sup> See the 1999 article by Martin Brand (point 22), regarding this methodology.

<sup>7</sup> The Development of a Corporate Services Price Index for Accounting services" presented to the Voorburg Group in 1999.

<sup>8</sup> See the 1997 article by Jonathan Price, as well as Dave Watts' 1999 article (point 23), regarding this methodology.

The cumbersome nature and the difficulties inherent in this approach led index developers in the United Kingdom to select an alternative method to model pricing.

#### Fee Income Method by Professional Grades of Workers

Even if this method seems to be more suitable for the respondents, it does not take into account changes in productivity nor changes in staff composition in completing an actual contract.

#### 5. Analysis of "goodness" of published data

Given all the changes in the methodology applied, the index construction seems to be still underway. Indexes are calculated since the beginning of 1996. Compared to the Corporate Services Price Index, prices charged by the UK accountancy industry to other business customers have risen by about twice the rate over the three-year period (1996-1998). Due to problems related to the choice of the methodology, the price collection continued until the second quarter of 1999. It was envisaged that the survey would recommence in early 2000 on a model price collection basis for medium and smaller firms and on a fee income method by professional grades of workers for larger companies like the "Big five".

### **G. The United States:**

#### 1. Business Model

Establishments classified within SIC 8721 include:

Accounting services	Certified public accounting services
Auditing services	Payroll accounting services
Bookkeeping and billing services	

Accounting, auditing and bookkeeping services can be defined as establishments primarily engaged in furnishing accounting, bookkeeping and related auditing services, including payroll, tax and billing services. Establishments offering the services of a Certified Public Accountant are included in the industry, but membership in the industry is not limited to these firms. No specific credentials or licenses are necessary for membership in the industry.

While establishments in SIC 8721 may use data processing and tabulating techniques when providing their services, establishments whose primary source of receipts is data processing and tabulating services are classified in SIC 7374.

#### Structure of the accounting, auditing and bookkeeping industry

In the United States, smaller firms dominate the accounting industry, with 88.3 % of them having under ten employees. A majority of revenue in accounting firms comes from Payroll accounting services, Auditing and Tax Preparation services. Small firms are local and specialize in servicing regional and small businesses or

individuals. With many accounting services, there is no correlation between size of a firm and type of service provided in accounting services overall. Larger firms can offer a larger variety of services, where smaller firms may specialize in one aspect of accounting, and thus providing more individual attention to a clients' needs. The only real exception to this rule is audits. Any firm can perform an audit, but larger firms are the ones that are usually certified to do them for SEC (Securities Exchange Commission – government agency responsible for protecting investors and maintaining the integrity of the securities markets) purposes.

Many other business services are associated with companies that provide accounting services. These include Tax return preparation services, Collection services, Computer processing and Data preparation services, and Business consulting services. Many firms perform a variety of these services, and it is often difficult to make an appropriate industry classification.

The trend toward consolidation continues. Smaller firms know that to compete effectively in the current market requires high levels of expertise in a growing variety of services, plus strict quality control capabilities. This is increasingly difficult for smaller, independent firms to achieve. Technology has made many of the services traditionally done by smaller accounting firms obsolete. Many individuals and small businesses are using computer software packages to prepare their taxes, and to perform other accounting services. This has increased the need for mergers among smaller firms, and has also led many medium and large firms to diversify their services.

## 2. Government Regulation

It is questionable whether or not these consolidations are in violation of the rules that guarantee the independence of accountants and auditors. As previously stated, massive consolidations are taking place within the accounting industry. The US Securities and Exchange Commission (SEC) is investigating consolidation activities to determine whether these mergers could result in violations of the rules that guarantee the independence of accountants and auditors. Several accounting firms formed partnerships with financial firms such as brokerage and investment banking firms. One concern with this is that accounting firms that recommend to their clients investment products, could develop a bias in audits done on these companies. Under current rules, auditors are not allowed to accept commissions for recommending investment products or services to their audit clients. Thus, the terms of consolidation deals are important. Partners in accounting firms that are purchased by large financial services companies become employees of a large company, but they also may choose to retain ownership in the firm that does audits. This type of arrangement could create a conflict.

## 3. Pricing Methodology

Accounting is defined as a service that provides many users with financial information that will aid them in making financial and economic decisions. The provision of financial information can come in the form of oral/written advice or conclusions, or in the form of specific reports prepared by the accounting firm (e.g., financial statements, tax returns, or auditor's report). The users of the information may include the management, stockholders, employees, clients, regulators, or competitors of the client.

Because the information or service provided is so varied, it is impossible to define the industry output as one specific item or report. The output is best defined as the provision of financial information necessary for edification of individual clients and business operations. This financial information provides analysis on profit and loss statements, inventory controls, tax management, etc. In addition to financial information, the

industry also provides proper documentation necessary for a particular business activity. This provision of information begins with an agreement between the client and the accounting firm, followed by the accountant's research, verification and reports and is completed when the accounting firm presents all information to the client.

The accounting industry encompasses many services but most often involves compilation, review, audit, bookkeeping, tax work, or payroll work. There are important distinctions between these services that will probably affect the price. Bookkeeping is the maintenance of a record of the accounts and transactions of a business. Compilation involves the summarizing of financial books without verifying the data. Review requires summarizing and testing the information in financial statements; an audit requires a complete test of the information in the books, as well as a written verification that the books are accurate and fair. Payroll services are usually a third party that monitors and produces payroll records for their client.

Tax services include tax compliance, consultation, or representation. Within any one of these tax services, an accounting firm may provide services to a corporation, a partnership, or an individual concerning income taxes, payroll taxes, international taxes, etc. Tax compliance activities seem to be the most common tax-related services and involve any research and documents necessary to meet the tax requirements of the federal, state or local government. Within tax compliance services, accounting firms spend the most time on individual income taxes. Tax representation involves a very small percentage of accountants' time, but is important because the accountant's signature on a tax return certifies that the information reported is accurate. By signing the tax return the accountant takes responsibility to respond to any questions about the return. Tax consultation/planning involves the analysis of tax problems, the recommendation of a course of action, and the monitoring of the implementation of the courses of action.

The two most common types of prices in the accounting industry are hourly rates and contract rates based on engagements. Before a tax, audit or consulting service is performed, a date and a final or at least a maximum price for the service will be negotiated. This information will then be confirmed with the client in an "engagement" or "arrangement" letter. The price in the letter will usually include staff hours, travel and other expenses. The prices collected for the Producer Price Index are usually taken right from the engagement letter. A service is repriced along with its prices as a rate per hour, type of employee working on the project, travel time, computer time, realization rate, etc. This service is held constant and prices are collected quarterly or biannually.

This is a relatively easy industry to price, because many firms have set rates for different levels of employees that are readily available. For all services in the Accounting, auditing and bookkeeping industries the following price determining characteristics apply:

1. Labour hours required (size of purchase)  
For example, the longer it takes to complete a project, the higher the price to the customer.
2. Degree of professional expertise required  
Hours billed by an accountant will be more expensive than hours billed by an administrative assistant.
3. Season (tax or non-tax)  
Services required during January-April are more costly than those required "off season".

4. Type of buyer (public company, government, small business, individual, first time client)  
Government clients will be given the lowest price; larger business will receive lower bids per hours because they require such large quantities of service and because contracts with them are very competitive. Smaller firms have less leverage than both the government and large firms.
5. Size of buyer  
Larger companies because they purchase services in bulk are more likely to pay lower rates.
6. Recurring vs. Non-recurring service  
Repeat buyers are more likely to receive discounts.

#### 4. Limitations/concerns with published data.

It is rare that a client requires the same accounting service monthly or annually. The accounting service rendered to a particular customer usually varies. The hours worked on a project can differ, as well as the expertise of the personnel that performs each task (i.e. a junior vs. senior accountant). The customer can also vary his/her request each month. For example, an accounting firm can be asked to do payroll accounting for 100 employees in March and 95 employees in April. In this case, the producer price index would hold the number of employees constant and price the payroll services rendered to 100 employees month to month. A disadvantage of this pricing methodology is that, in many cases, the actual project or service differs month to month or year to year; therefore, it is difficult to hold the service rendered constant month to month or year to year.

If substitution is necessary, the substitute client should be about the same size according to its income, and should be in the same industry as the firm or individual it replaces. For example, if the service being priced is payroll services for an architecture firm, and the client no longer exists, they should be replaced with an architecture firm of similar size. If a quote from a client in the same industry as the original client is not available, it will be more important that the number of hours required to perform the job is the same. The service should also be provided at the same time of the year.

Major price changes occur in January at many firms. This is also the beginning of “tax season”. Because of this, it is difficult to get reporters to take time to report their prices immediately.

#### 5. Analysis of “goodness” of published data

This industry has recently been resampled. Prior to resampling the publication structure was as follows:

Accounting, auditing, and bookkeeping services

Primary services

Single service transactions

Bookkeeping

Compilation and review

Tax preparation and planning

Auditing

Multiple services transactions

Other receipts



After the resampling took place, earlier this year, the publication structure was changed to:

Accounting, auditing, and bookkeeping

Primary services

Payroll accounting services

Auditing

Tax preparation and planning

Compilation and review

Bookkeeping and billing services

Multiple services transactions and other accounting services

Other receipts

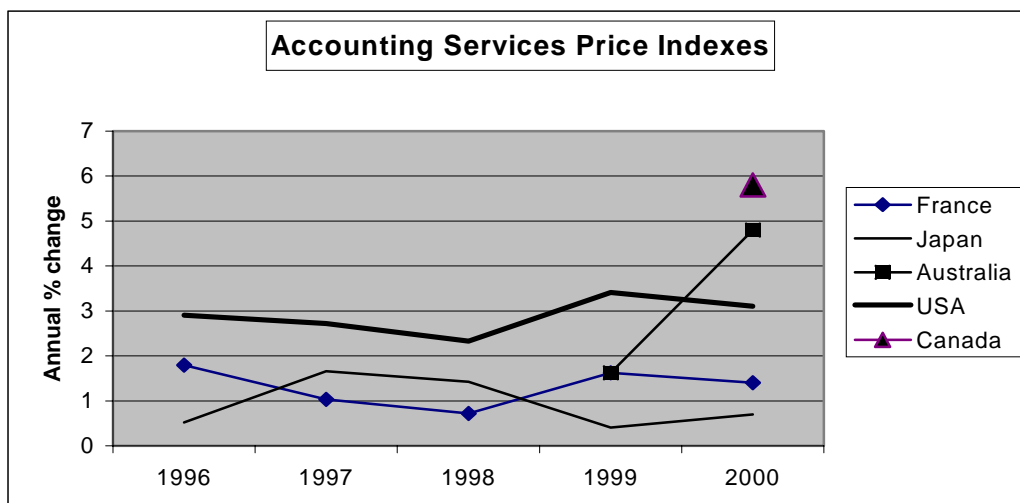
After resampling, the index experienced some minor changes. Payroll accounting services were added, Bookkeeping was changed to Bookkeeping and billing services and multiple transactions and other accounting services was added to form a “catch all” index.

The index for Accounting, auditing and bookkeeping services has only been in publication for five years. As the index shows, there has been a steady increase in prices since 1995. This replicates exactly what the accounting industry should be doing in a time of economic prosperity. Industry prices usually move with a change in the economy. Demand increases for accounting services when the economy is doing well; thus prices for these services are higher.

### **Index data**

The following graph and table offer a comparison between the different countries annual rates of inflation for Accounting services. This is a simple comparison between indexes and does not take into consideration neither exchange rates nor purchasing power parities.

Abstracting from these technicalities, annual percentage increases are small, except for Australia where the rate of increase from 1999 to 2000 jumped to about 5% from 1.5%. For Canada, the preliminary annual rate of increase ,excluding tax preparation services for individuals and unincorporated businesses, was 5.7% between 1999 and 2000. Further annual rates of price changes show no obvious upward or downward trend.



**Table AIII - Annual Price indexes**

Year\Country	France	Japan	Australia	USA	Canada
1995	100.0	100.0	-	101.3	-
1996	101.8	100.6	-	102.9	-
1997	102.9	102.2	-	105.7	-
1998	103.6	103.7	99.6	108.2	-
1999	105.3	104.1	101.6	111.9	100.0
2000	106.8	104.9	106.5	115.4	105.7

## **Appendix IV Numerical Example**

### **1. Example of the Distribution of Contracts and Weightings**

The example that is presented in the following tables reflects all the calculations required to obtain a price index for accounting services for a specific region (Ontario). The reader is invited to follow the example using the questionnaire and the respondent's guide.

In Table AIVa, column 1 shows the breakdown, in percentage, of operating revenue of two firms (ACCPLUS and TAXPLUS) according to the six types of service offered by company in this industry, and column 4 provides the corresponding operating revenue in dollar terms.

For example, in Table AIVa, the firm (ACCPLUS) derives 65% of its operating revenue in 1999 from the sale of audit, review and related services. Since it reported total operating revenues of \$800,000, this means that it earned \$520,000 from the above services. Using the established rule of distribution and in order to avoid the need to ask the firm to write down all of its contracts, the respondent is required to calculate the number of contracts it needs to provide, i.e.: ( $65 / 10 = 6.5$  rounded down to 6 contracts) and to write the result in column 3. The number 10 represents the maximum number of contracts. The services that appear in the shaded boxes do not form part of the survey. Accounting offices that realise revenues from sales of these services are not required to do the calculation to determine the number of contracts for these services.

**Table AIVa - Distribution of operating revenue by type of service:**

**Firm ACCPLUS** → 1999 operating revenue : \$800,000

The operating revenue of this firm is distributed as follows:

	% of Operating Revenue  (1)	Calculation  (2)	Number of Representative Contracts  (÷ by 10) rounded down to the nearest number (3)	Operating Revenue by Service Category  (4)
A. Audit, review and related services	65	÷ 10 =	6	\$520,000
B. Other assurance services	12	÷ 10 =	1	\$96,000
C. Bookkeeping, compilation and general accounting services	10	÷ 10 =	1	\$80,000
D. Tax preparation services for corporate clients	13	÷ 10 =	1	\$104,000
E. Tax preparation services for individuals and unincorporated businesses	0	÷ 10 =	0	\$0
F. Other services	0			\$0
<b>Total</b>	<b>100%</b>		<b>9</b>	<b>\$800,000</b>

**Firm TAXPLUS** → 1999 operating revenue : \$2,400,000

The operating revenue of this firm is distributed as follows:

	% of Operating Revenue  (1)	Calculation  (2)	Number of Representative Contracts  (÷ by 10) rounded down to the nearest number (3)	Operating Revenue by Service Category  (4)
A. Audit, review and related services	32	÷ 10 =	3	\$768,000
B. Other assurance services	0	÷ 10 =	0	\$0
C. Bookkeeping, compilation and general accounting services	25	÷ 10 =	2	\$600,000
D. Tax preparation services for corporate clients	31	÷ 10 =	3	\$744,000
E. Tax preparation services for individuals and unincorporated businesses	12	÷ 10 =	1	\$288,000
F. Other services	0			\$0
<b>Total</b>	<b>100%</b>		<b>9</b>	<b>\$2,400,000</b>

The reader can follow a detailed example of the price index calculation in the next section. This section and its tables display information from Table AIVa along with detailed mathematical formulae that are presented just before tables AIVb and AIVc.

## 2. Price index calculation

In Table AIVb, the most detailed price indexes are calculated by type of service i, by firm j, by region r, using the geometric mean of price relatives of contracts c. The geometric mean is used to average prices over contracts and to mitigate the influence of extreme price changes.

For example, result (1) in table AIVb is derived using the following formula in the numerical example below.

$$P_{t/b}^{irj} = \left( \prod_{c=1}^k \frac{P_t^{irjc}}{P_b^{irjc}} \right)^{\frac{1}{k}} \sim \text{formula (1)}$$

$$P_{2000/1999}^{Audit, Accplus, Ontario} = \left( \frac{\$5,000}{\$5,000} * \frac{\$15,000}{\$15,000} * \frac{\$20,000}{\$20,000} * \frac{\$180,000}{\$150,000} * \frac{\$175,000}{\$100,000} * \frac{\$150,000}{\$125,000} \right)^{\frac{1}{6}} = 1.167$$

The calculation of price index aggregates by service i, by region r (only the region of Ontario in this example) is found in Table AIVc. The calculation is done using weighted arithmetic means, the weights being equal to the ratio of the value of a service i and of a region r (Ontario) by firm to the total value of that service across all firms by service, by region.

For example, result (2) in Table AIVc is derived using the following formula in the numerical example below

$$P_{t/b}^{ir} = \sum_{j=1}^n \left( \frac{w_b^{irj}}{\sum_{j=1}^n w_b^{irj}} * P_{t/b}^{irj} \right) \sim \text{formula (2)}$$

$$P_{2000/1999}^{Audit, Ontario} = \frac{w_{1999}^{Audit, Accplus, Ontario}}{w_{1999}^{Audit, Accplus, Ontario} + w_{1999}^{Audit, Taxplus, Ontario}} P_{2000/1999}^{Audit, Accplus, Ontario} + \frac{w_{1999}^{Audit, Taxplus, Ontario}}{w_{1999}^{Audit, Accplus, Ontario} + w_{1999}^{Audit, Taxplus, Ontario}} P_{2000/1999}^{Audit, Taxplus, Ontario}$$

$$P_{2000/1999}^{Audit, Ontario} = \frac{\$520,000}{\$520,000 + \$768,000} * 1.167 + \frac{\$768,000}{\$520,000 + \$768,000} * 1.145 = 1.154$$

Price index aggregates by region for all firms are also calculated using weighted arithmetic means, the weights being equal to the ratio of the value of a region r (Ontario) by service for all firms to the total value of the region for all firms and for all services. Again, the calculations related to the example (result (3) in Table AIVc) of the price index for the region of Ontario for all services and for all firms (Accplus and Taxplus) can be found just under the algebraic presentation of the formula.

$$P_{t/b}^r = \sum_{i=1}^L \left( \frac{w_b^{ir}}{\sum_{i=1}^L w_b^{ir}} * P_{t/b}^{ir} \right) \text{ where } w_b^{ir} = \sum_{j=1}^n w_b^{irj} \sim \text{formula (4)}$$

$$P_{2000/1999}^{Ontario} = \frac{w_{1999}^{Audit, Ontario}}{w_{1999}^{Audit, Ontario} + \dots + w_{1999}^{Taxprepind, Ontario}} * P_{2000/1999}^{Audit, Ontario} + \dots$$

$$\dots + \frac{w_{1999}^{Taxprepind, Ontario}}{w_{1999}^{Audit, Ontario} + \dots + w_{1999}^{Taxprepind, Ontario}} * P_{2000/1999}^{Taxprepind, Ontario}$$

$$P_{2000/1999}^{Ontario} = \frac{\$1,288,000}{\$1,288,000 + \$96,000 + \$680,000 + \$848,000 + \$288,000} * 1.154 + \dots$$

$$\dots + \frac{\$240,000}{\$1,288,000 + \$96,000 + \$680,000 + \$848,000 + \$288,000} * 1.151 = 1.097$$

**Table AIVb - Price index calculation for each type of service at the level of the firm (Basic level):**

**Firm ACCPLUS → 1999 operating revenue : \$800,000**

	<b>P1999</b>	<b>P2000</b>	$P_{2000/1999}^{ijrc}$ (per contract)	$P_{2000/1999}^{ijr}$ (per service)
A. Audit, review and rel. services	\$5,000	\$5,000	1.000	1.167
	\$15,000	\$15,000	1.000	} (1)
	\$20,000	\$20,000	1.000	
	\$150,000	\$180,000	1.200	
	\$100,000	\$175,000	1.750	
	\$125,000	\$150,000	1.200	
B. Other assurance services	\$22,000	\$23,650	1.075	1.075
C. Bookkeeping, comp. and gen. acc. Services	\$5,000	\$5,270	1.054	1.054
D. Tax prep. serv. for corporate clients	\$7,800	\$8,350	1.071	1.071
E. Tax prep. serv. for indiv. and unincorp. bus.				
F. Other services				

**Firm Taxplus → 1999 operating revenue : \$2,400,000**

	<b>P1999</b>	<b>P2000</b>	$P_{2000/1999}^{ijrc}$ (per contract)	$P_{2000/1999}^{ijr}$ (per service)
A. Audit, review and rel. services	\$120,000	\$180,000	1.500	1.145
	\$13,000	\$13,000	1.000	
	\$22,000	\$22,000	1.000	
B. Other assurance services				
C. Bookkeeping, comp. and gen. acc. Services	\$24,000	\$25,800	1.075	1.053
	\$45,000	\$46,440	1.032	
D. Tax prep. serv. for corporate clients	\$10,000	\$10,110	1.011	1.026
	\$15,000	\$15,350	1.023	
	\$20,000	\$20,999	1.045	
E. Tax prep. serv. for indiv. and unincorp. bus.	\$12,600	\$14,500	1.151	1.151
F. Other services				

**Table AIVc - Price index calculation for each type of service and for all services for the region of Ontario:**

**Firm ACCPLUS → 1999 operating revenue : \$800,000**

	Operating Revenue by Service Category	Firm Share of Service	$P_{2000/1999}^{ijr}$ (per service)
A. Audit, review and rel. services	\$520,000	40.4%	1.167
B. Other assurance services	\$96,000	100.0%	1.075
C. Bookkeeping, comp. and gen. acc. Services	\$80,000	11.8%	1.054
D. Tax prep. serv. for corporate clients	\$104,000	12.3%	1.071
E. Tax prep. serv. for indiv. and unincorp. bus.	\$0	0.0%	N/A
F. Other services	\$0		
<b>Total</b>	<b>\$800,000</b>		

**Firm Taxplus → 1999 operating revenue : \$2,400,000**

	Operating Revenue by Service Category	Firm Share of Service	$P_{2000/1999}^{ijr}$ (per service)
A. Audit, review and rel. services	\$768,000	59.6%	1.145
B. Other assurance services	\$0	0.0%	N/A
C. Bookkeeping, comp. and gen. acc. Services	\$600,000	88.2%	1.053
D. Tax prep. serv. for corporate clients	\$744,000	87.7%	1.026
E. Tax prep. serv. for indiv. and unincorp. bus.	\$288,000	100.0%	1.151
F. Other services	\$0		
<b>Total</b>	<b>\$2,400,000</b>		

**All firms - Ontario**

	Sum of operating revenue	Service Share	$P_{1999/1999}^{i,Ontario}$	$P_{2000/1999}^{i,Ontario}$
A. Audit, review and rel. services	\$1,288,000	40.3%	1.000	1.154 (2)
B. Other assurance services	\$96,000	3.0%	1.000	1.075
C. Bookkeeping, comp. and gen. acc. Services	\$680,000	21.3%	1.000	1.053
D. Tax prep. serv. for corporate clients	\$848,000	26.5%	1.000	1.032
E. Tax prep. serv. for indiv. and unincorp. bus.	\$288,000	9.0%	1.000	1.151
F. Other services	\$0	0.0%		
<b>Total</b>	<b>\$3,200,000</b>	<b>100.0%</b>	<b>1.000</b>	<b>1.097 (3)</b>

## **Appendix V Classifications**

### **A. Central Product Classification (CPC Version 1.0)**

#### **Classes of Services:**

#### **DIVISION 82 PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES**

- 822 Accounting services, financial auditing and bookkeeping
  - 8221 Accounting services and financial auditing services
    - 82211 Financial auditing services
    - 82212 Accounting review services
    - 82213 Compilation of financial statements services
    - 82219 Other accounting services
  - 8222 82220 Bookkeeping services, except tax returns
- 823 Advisory services related to taxation
  - 8231 82310 Corporate tax planning and consulting services
  - 8232 82320 Corporate tax preparation and review services
  - 8233 82330 Individual tax preparation and planning services
- 824 Insolvency and receivership services
  - 8240 82400 Insolvency and receivership services

#### **Description of Service Classes:**

#### **822 Accounting services, financial auditing and bookkeeping**

##### **82211 Financial auditing services**

This subclass includes:

examination services for the accounting records and other supporting evidence of an organisation for the purpose of expressing an opinion as to whether financial statements of the organisation present fairly its position as at a given date and the results of its operations for the period on that date, in accordance with generally accepted accounting principles.



### **82212 Accounting review services**

This subclass includes:

reviewing services for annual and interim financial statements and other accounting information. The scope of a review is less than that of an audit, and the level of assurance provided is thus lower.

### **82213 Compilation of financial statements services**

This subclass includes:

compilation services for financial statements from information provided by the client. No assurances regarding the accuracy of the resulting statements are provided;  
preparation services for business tax returns, when provided as a package with the preparation of financial statements for a single fee, classified here;  
compilation of income statements, balance sheets etc.;  
analysis of balance sheets etc.

*This subclass does not include:*

- *business tax preparation services, when provided as separate services, cf. 82320*

### **82219 Other accounting services**

This subclass includes:

other accounting services such as attestations, valuations, preparation services for pro forma statements, etc

### **82220 Bookkeeping services, except tax returns**

This subclass includes:

book-keeping services consisting in classifying and recording business transactions in terms of money or some unit of measurement in the books of account

*This subclass does not include:*

*book-keeping services related to tax returns, cf. 823;*  
*payroll services, including payroll computation and ledgers, cf. 85990*

### **823 Advisory services related to taxation**

This group includes:

advice to companies and private individuals for the purpose of minimising taxes;  
drawing-up and defending taxation statements;  
services consisting in assisting enterprises in tax planning and control, other than for income tax, and preparing all documentation required by law.

### **82310 Corporate tax planning and consulting services**

### **82320 Corporate tax preparation and review services**

This subclass includes:

preparation of returns for all kinds of taxes (e.g. VAT)

### **82330 Individual tax preparation and planning services**

This subclass includes:

tax preparation and planning services for unincorporated business

tax preparation and planning services for individuals

### **824 Insolvency and receivership services**

### **82400 Insolvency and receivership services**

## **B. North American Industrial Classification System (NAICS Canada)**

### **54 Professional, Scientific and Technical Services**

This sector comprises establishments primarily engaged in activities in which human capital is the major input. These establishments make available the knowledge and skills of their employees, often on an assignment basis. The individual industries of this sector are defined on the basis of the particular expertise and training of the service provider.

The main components of this sector are legal services industries, accounting and related services industries, architectural, engineering and related services industries, surveying and mapping services industries, design services industries, management, scientific and technical consulting services industries, scientific research and development services industries, and advertising services industries.

The distinguishing feature of this sector is the fact that most of the industries grouped in it have production processes that are almost wholly dependent on worker skills. In most of these industries, equipment and materials are not of major importance. Thus, the establishments classified in this sector sell expertise. Much of the expertise requires a university or college education, though not in every case.

Establishments primarily engaged in providing instruction and training in a wide variety of subjects and those primarily engaged in providing health care by diagnosis and treatment are not included in this sector.

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#### **5412 Accounting, Tax Preparation, Bookkeeping and Payroll Services**

See industry description for [54121](#), below.

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#### **54121 Accounting, Tax Preparation, Bookkeeping and Payroll Services**

This industry comprises establishments primarily engaged in auditing accounting records; designing accounting systems; preparing financial statements; developing budgets; preparing tax returns; processing payrolls; bookkeeping; and billing.

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#### **541212 Offices of Accountants**

This Canadian industry comprises establishments primarily engaged in providing a range of accounting services, such as the preparation of financial statements, the preparation of management accounting reports, the review and auditing of accounting records, the development of budgets, the design of accounting systems, and the provision of advice on matters related to accounting. These establishments may also provide related services, such as bookkeeping services, tax return preparation services, payroll services, management consulting services and insolvency services.

Accountant, professional	Chartered accountant, offices of
Accounting services, professional	Professional accounting firm
Auditing accountants, offices of	Public accountants, offices of

*Exclusion(s):* Establishments primarily engaged in:

- providing tax return preparation services, without also providing accounting or auditing services ([541213](#), Tax Preparation Services); and
- providing bookkeeping, billing and payroll processing services, without also providing accounting or auditing services ([541215](#), Bookkeeping, Payroll and Related Services).

### **541213 Tax Preparation Services**

This Canadian industry comprises establishments primarily engaged in providing only tax return preparation services. These establishments do not provide accounting, bookkeeping, billing or payroll processing services.

Income tax return preparation services without accounting, auditing, or bookkeeping services      Tax return preparation services (without accounting, auditing, or bookkeeping services)

- *Exclusion(s)*: Establishments primarily engaged in:
- providing a range of accounting services ([541212](#), Offices of Accountants).

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### **541215 Bookkeeping, Payroll and Related Services**

This Canadian industry comprises establishments primarily engaged in providing bookkeeping, billing or payroll processing services. These establishments do not provide accounting services, such as the preparation of financial statements, the preparation of management accounting reports, and the review and auditing of accounting records.

Billing and bookkeeping services      Payroll processing services

*Exclusion(s)*: Establishments primarily engaged in:

- providing a range of accounting services ([541212](#), Offices of Accountants); and
- providing tax return preparation services, without also providing accounting or auditing services ([541213](#), Tax Preparation Services).

## **C. Standard Industrial Classification (1980 SIC-E)**

### **Division M: Business Service Industries**

#### **MAJOR GROUP 77 BUSINESS SERVICE INDUSTRIES**

Establishments primarily engaged in providing services more to the business community than to the general public. Included in this MAJOR GROUP are employment agencies and personnel suppliers computer services accounting and bookkeeping services advertising services architectural, engineering and other scientific services lawyer and notary services management consulting services and business services not elsewhere classified.

#### **Industry Group 773 Accounting and Bookkeeping Services**

Establishments primarily engaged in providing auditing, accounting and bookkeeping services.

##### **7731 Offices of Chartered and Certified Accountants**

Establishments primarily engaged in providing auditing and accounting services. These establishments are headed by one or several accountants who are members of a professional accounting organisation.

##### **7739 Other Accounting and Bookkeeping Services**

Establishments primarily engaged in providing accounting and bookkeeping services not elsewhere classified. Establishments primarily engaged in income tax compilation are included here.

## **Appendix VI Future Trends Expected to Affect the Industry**

### **A. Mergers**

The recent merger, in 1998, between Price Waterhouse and Coopers and Lybrand have given rise to some concern about more mergers happening in the future. Various analysts of the accounting industry worry that other mergers among giants of this industry and even mergers between accounting firms and law firms are likely.

These expected mergers, which according to certain analysts are necessary to the growth of their profit and to their own existence, are for others considered to be potential nightmares because of the decreasing level of competition and the possibility of growing ethical conflicts. In fact, probable conflicts may arise, for example, in the case where a large client may hesitate to trust an audit mission provided by a big office which has also done a mandate for its principal competitor.

For our price survey, these mergers will mean an increasing level of difficulty to survey those firms and may have an impact on the selected sample.

### **B. Service Dynamic**

In recent years, a constant increase in the range of advisory services that are offered and in the range of non-traditional accounting services that are now available took place. These changes are not likely to stop in the short and medium term. Other new services will come on the scene and services that represent only a small proportion of operating revenue are likely to vanish within a short time.

New services related to the emergence of the Internet and the growing importance of automation should increase in popularity and be available to complement other services available to clients, such as audits. This type of accounting service, which has constituted the backbone of the industry, should continue to be the most popular service, but is likely to continue to decline in terms of the total operating revenue for the industry as a whole. This service, which is regarded as a gateway in many cases, should open the doors to complementary services. These complementary services, such as, strategic intelligence and information, are experiencing a boom, in the view of some analysts. This service offers clients the ability to obtain a great deal of information on competitors, potential clients and sub-contractors.

Other services may also swell the number of those already offered, or simply constitute a one-off service, such as WebTrust certification, which enables businesses to assure potential clients of the security of transactions at the time of purchase over the Internet, as well as the SysTrust certification service, which allows companies to ensure that a computer system is reliable and meets very strict standards. Furthermore, other services are emerging in the very short term, such as services to seniors, services tailored to the clientele, and a range of complementary services stemming from alliances between accounting offices and professionals in a wide variety of fields.

Over the next few years, efforts will be channelled in order to consolidate the new opportunities and to develop other, still unexplored, service avenues. This new dynamic will allow the industry to enhance its impact and its scale and thus all of the services offered to companies and even to individuals in Canada or elsewhere in the world via offices in the four corners of the globe. This momentum will also allow the industry to protect itself against incursions from other service industries trying to expand their current market share.

## Appendix VII Partial List of Internet Accounting Links

Accounting.com: [www.accounting.com](http://www.accounting.com)  
Accounting Professional's Resource Centre: [www.kentis.com](http://www.kentis.com)  
Accounting Standards Board, The (U.K.): [www.asb.org.uk](http://www.asb.org.uk)  
AccountingWEB (U.K.): [www.accountingweb.co.uk](http://www.accountingweb.co.uk)  
American Accounting Association (AAA) (U.S.): [www.aaa-edu.org](http://www.aaa-edu.org)  
American Institute of Certified Public Accountants: [www.aicpa.org](http://www.aicpa.org)  
Association of Chartered Accountants in the U.S.: [www.acaus.com](http://www.acaus.com)  
Auditing Practices Board, (The) (U.K.): [www.apb.org.uk](http://www.apb.org.uk)  
Canadian Institute of Chartered Accountants: [www.cica.ca](http://www.cica.ca)  
The Certified General Accountants Association of Canada: [www.cga-canada.org](http://www.cga-canada.org)  
Chartered Institute of Public Finance and Accountancy: [www.cipfa.org.uk](http://www.cipfa.org.uk)  
Conseil Supérieur de l'Ordre des Experts Comptables (France): [www.experts-comptables.com](http://www.experts-comptables.com)  
Confederation of Asia and Pacific Accountants: [www.capa.com.my](http://www.capa.com.my)  
CPA Australia: [www.cpaonline.com.au](http://www.cpaonline.com.au)  
Fédération des Experts Comptables Européens: [www.fee.be](http://www.fee.be)  
Financial Accounting Standards Board: [www.fasb.org](http://www.fasb.org)  
Financial and Management Accounting Committees of IFAC: [www.ifac.org](http://www.ifac.org)  
Information Systems Audit and Control Association & Foundation (The): [www.isaca.org](http://www.isaca.org)  
International Federation of Accountants: [www.ifac.org](http://www.ifac.org)  
The Institute of Chartered Accountants in Australia: [www.icaa.org.au](http://www.icaa.org.au)  
The Institute of Chartered Accountants in England & Wales (U.K.): [www.icaew.co.uk](http://www.icaew.co.uk)  
The Institute of Chartered Accountants in Ireland: [www.icaie.ie](http://www.icaie.ie)  
The Institute of Chartered Accountants of New Zealand: [www.icanz.co.nz](http://www.icanz.co.nz)  
The Institute of Chartered Accountants of Scotland: [www.icas.org.uk](http://www.icas.org.uk)  
Institute of Internal Auditors (The): [www.theiia.org](http://www.theiia.org)  
International Accounting Standards Committee: [www.iasc.org.uk](http://www.iasc.org.uk)  
International Federation of Accountants: [www.ifac.org](http://www.ifac.org)  
National Association of State Boards of Accountancy (The) (NASBA) (U.S.): [www.nasba.org](http://www.nasba.org)  
The Society of Management Accountants of Canada: [www.cma-canada.org](http://www.cma-canada.org)  
South African Institute of Chartered Accountants: [www.saica.co.za](http://www.saica.co.za)

