Canada – TaxMatters@EY

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In this issue

TaxMatters@EY is a monthly Canadian bulletin that summarizes recent tax news, case developments, publications and more. For more information, please contact your EY advisor.

Federal budget simplifies passive investment income proposals

Alan Roth, Toronto

Background

The 27 February 2018 federal budget proposed two measures to limit the deferral advantage of private companies earning passive investment income, both effective for taxation years beginning after 2018.

There are amendments to the small-business deduction rules as well as technical changes to the refundable dividend tax on hand account of private corporations to deal with the recovery of RDTOH and the payment of eligible dividends.

In this article we focus on the first of these two changes.

Corporate tax rates on income from an active business carried on in Canada are generally lower than personal income tax rates. Rates may be significantly less for Canadian-controlled private corporations (CCPCs) that are eligible for the small-business deduction and, accordingly, the small-business tax rate (on the first $500,000 of active business income for the year)[1]. To the extent that after-tax earnings are retained in a corporation, a tax deferral is available. The amount deferred is eventually taxed at the personal level when retained earnings are distributed to individual shareholders as dividends. Due to lower corporate rates, there is a greater amount of after-tax earnings available for reinvestment at the corporate level, as compared to after-tax earnings available for reinvestment at the personal level.

On 18 July 2017, the federal government released a consultation paper in which it proposed to eliminate this perceived tax advantage by outlining possible, and rather complex, approaches that would have increased the tax rate substantially (up to an over 70% effective tax rate[2]) on earnings from corporate after-tax income reinvested in passive investments (not related to the corporation's active business). These proposals were part of the government's broad-based measures announced on that date that primarily targeted CCPCs, their shareholders and family members (see "Draft proposals include fundamental changes to private corporation taxation" in the September 2017 issue of TaxMatters@EY).

In mid-October 2017 (after the consultation period for the 18 July proposals ended on 2 October 2017), the government announced that any proposals targeting the reinvestment of after-tax corporate business earnings in passive investments would be limited to private corporations with passive investment income in excess of $50,000 per year, with details to be provided in the 2018 federal budget. However, the 2018 federal budget did not adopt any of the various approaches considered in the 18 July 2017 consultation paper. Instead, the budget announced greatly simplified measures along with draft legislation, targeting the reinvestment of after-tax corporate business earnings in passive investments. The draft legislation is now included in Bill C-74, the first 2018 budget bill.

Federal budget 2018 passive investment income proposals

The availability of the $500,000 small-business limit (discussed above) and reduced small-business tax rate must be shared by companies that are part of an associated group[3] for tax purposes. Existing legislation also reduces the income available for the small-business deduction to the extent that an associated group of companies has taxable capital[4] in excess of $10 million. The $500,000 small-business limit is reduced on a straight-line basis for CCPCs (together with any associated companies) that have taxable capital employed in Canada of between $10 million and $15 million in the preceding year. The small-business deduction is eliminated completely when taxable capital exceeds $15 million.

The 2018 federal budget is proposing to introduce a second grind to the $500,000 limit to the extent a CCPC has income from passive investments[5] in excess of $50,000 in a year. Effective for taxation years beginning after 2018, a CCPC's small-business limit for a taxation year will be reduced by $5 for every $1 by which the CCPC's passive investment income and that of its associated companies in total exceeds $50,000 in the preceding year. A CCPC's small-business limit will be reduced by the greater of the reduction determined by the taxable capital grind and the reduction determined by the proposed passive investment income grind.

The entire small-business deduction will be unavailable to a CCPC in a taxation year if income from passive investments of the associated group exceeds $150,000 in the preceding year, or if the total taxable capital of the associated group exceeds $15 million in the preceding year. Total investment income earned by a CCPC, for purposes of its calculation and taxation, is defined in the *Income Tax Act* (the Act)[6]. Bill C-74 includes a modified definition of investment income[7] for purposes of calculating passive investment income for the small-business limit grind.

The determination of a CCPC's small-business limit, including the application of the taxable capital and proposed passive investment income grinds, will be an annual task. Therefore, it is conceivable that a CCPC could regain access to the small-business deduction if its passive investment income was too high in one year but lower in the following year.

Bill C-74 also includes proposed anti-avoidance provisions. For example, a deeming rule would deem two related companies to be associated for purposes of the passive investment income grind if one company lends or transfers passive investment property, directly or indirectly, to the other with a view to reduce the amount of the grind. Also, although the proposed rules take effect for taxation years beginning after 2018, the rules would apply earlier if a CCPC has triggered a short taxation year (that begins before 2019 but ends after 2018) in an attempt to defer the application of the proposed rules.

[1] The provinces and territories have their own small-business tax rates, with most jurisdictions also applying a $500,000 active business income limit. The federal small-business rate is 10% in 2018, which will decrease to 9% in 2019. The federal general corporate rate is 15%.

[2] See EY Tax Alert 2018 Issue No. 8, Private Company Insights: federal budget 2018-19.

[3] A corporation is associated with another corporation if it meets one of the tests set out in the *Income Tax Act* (Canada) at any time in its taxation year. Generally, these tests are based on the share ownership of and control over the corporations. For example, one corporation may be associated with another in a taxation year if, at any time in the year, one of the corporations is controlled directly or indirectly by the other, or if both corporations are controlled directly or indirectly by the same person or group of persons.

[4] In very general terms, a corporation's taxable capital is the aggregate of the amount by which its shareholders' equity, loans and advances to the corporation, its future income tax liability, and certain amounts not currently deductible for income tax purposes exceed certain types of investments in other corporations.

[5] Examples include dividend income on a stock portfolio, interest income on the holding of debt instruments and taxable capital gains realized on the disposition of assets that are not used by the corporation to earn active business income in Canada.

[6] "Aggregate investment income" as defined in subsection 129(4) of the Act.

[7] "Adjusted aggregate investment income" as defined in the proposed adjustments to subsection 125(7) of the Act.

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The following examples illustrate the interaction of the existing taxable capital and proposed passive investment income grinds in determining a CCPC's small-business limit for the 2019 taxation year:

Example 1

Scott is a Canadian resident and is the CEO and sole shareholder of Parts-for-cars Inc., a wholesale distributor of auto parts located near Windsor, Ontario. Parts-for-cars Inc. has a 31 December year end and is not associated with any other corporations for taxation purposes in either 2018 or 2019. Since Parts-for-cars Inc. is a CCPC earning active business income, it could potentially qualify for the small-business deduction. Not all of Parts-for-cars Inc.'s after-tax income is required by the company or by Scott each year and, therefore, a portion of the company's retained earnings is invested each year in a portfolio of blue chip stocks. Upon retirement, Scott intends to sell the portfolio, withdraw the proceeds from the company and purchase a home in Florida. For the 2018 taxation year, Parts-for-cars Inc.'s taxable capital employed in Canada was $12 million and the stock portfolio earned $95,000 in dividend income.

As Parts-for-cars Inc.'s 2018 taxable capital employed in Canada was between $10 million and $15 million, and because its passive investment income was between $50,000 and $150,000 that year, the company's federal $500,000 small-business limit for 2019 will be reduced by the greater of the taxable capital grind and the grind applicable to the passive investment income earned within the company in 2018. The reduction to the 2019 small-business limit attributable to the company's taxable capital is calculated under the Act as follows[8]:

$$\$500{,}000 \times \frac{0.225\% \times (\$12{,}000{,}000 \text{ of taxable capital} - \$10{,}000{,}000)}{\$11{,}250}$$

$$= 500{,}000 \times \frac{4{,}500}{11{,}250}$$

= **$200,000**

The passive investment income grind under the proposed legislation[9] is calculated as follows:

<u>$500,000</u> Parts-for-cars Inc.'s <u>small-business limit</u> x 5 x ($95,000 of dividend income - $50,000)

/$500,000

= **$225,000**

The greater of the two small-business limit grinds is the passive investment income one and, therefore, Parts-for-cars Inc.'s small-business limit in 2019 will be $275,000 ($500,000 - $225,000).

Example 2

Assume that the facts are the same as in Example 1, except that Parts-for-cars Inc. is associated for taxation purposes with Boatmotors Co. Boatmotors is a wholesale distributor of small watercraft motors located in Owen Sound, Ontario, and also wholly owned by Scott. Boatmotors also has a 31 December year end. In 2018, the company's taxable capital employed in Canada was $2 million. For the past two years, Boatmotors has held a relatively smaller stock portfolio for which it earned $10,000 in dividend income in 2018. Boatmotors also qualifies for the small-business deduction.

In this case, since Parts-for-cars Inc. and Boatmotors are associated for tax purposes, the two companies must share the $500,000 small-business limit. Assume that each of the two companies is assigned $250,000 of that small-business limit each year. For purposes of calculating the taxable capital grind for each company for the 2019 taxation year, the sum of the two companies' 2018 taxable capital employed in Canada must be used, since the companies are associated with each other. Therefore, the taxable capital grind for each company is calculated as follows:

$$\$250{,}000 \text{ assigned small-business limit} \times \frac{0.225\% \times (\$14 \text{ million total taxable capital} - \$10 \text{ million})}{\$11{,}250}$$

$$= 250{,}000 \times \frac{9{,}000}{11{,}250}$$

= **200,000**

Similarly, for purposes of calculating the 2019 passive investment income grind for each company, the total dividend income received in 2018 by both companies must be used, as follows:

<u>$250,000 small-business limit for each company</u> x 5 x ($105,000 total dividend income - $50,000)

/$500,000

= **$137,500**

The greater of the two small-business limit grinds is the taxable capital one and, therefore, each company's small-business limit in 2019 will be $50,000 ($250,000 - $200,000).

[8] See s. 125(5.1)(a) of the Act.
[9] See proposed s. 125(5.1)(b) of the Act.

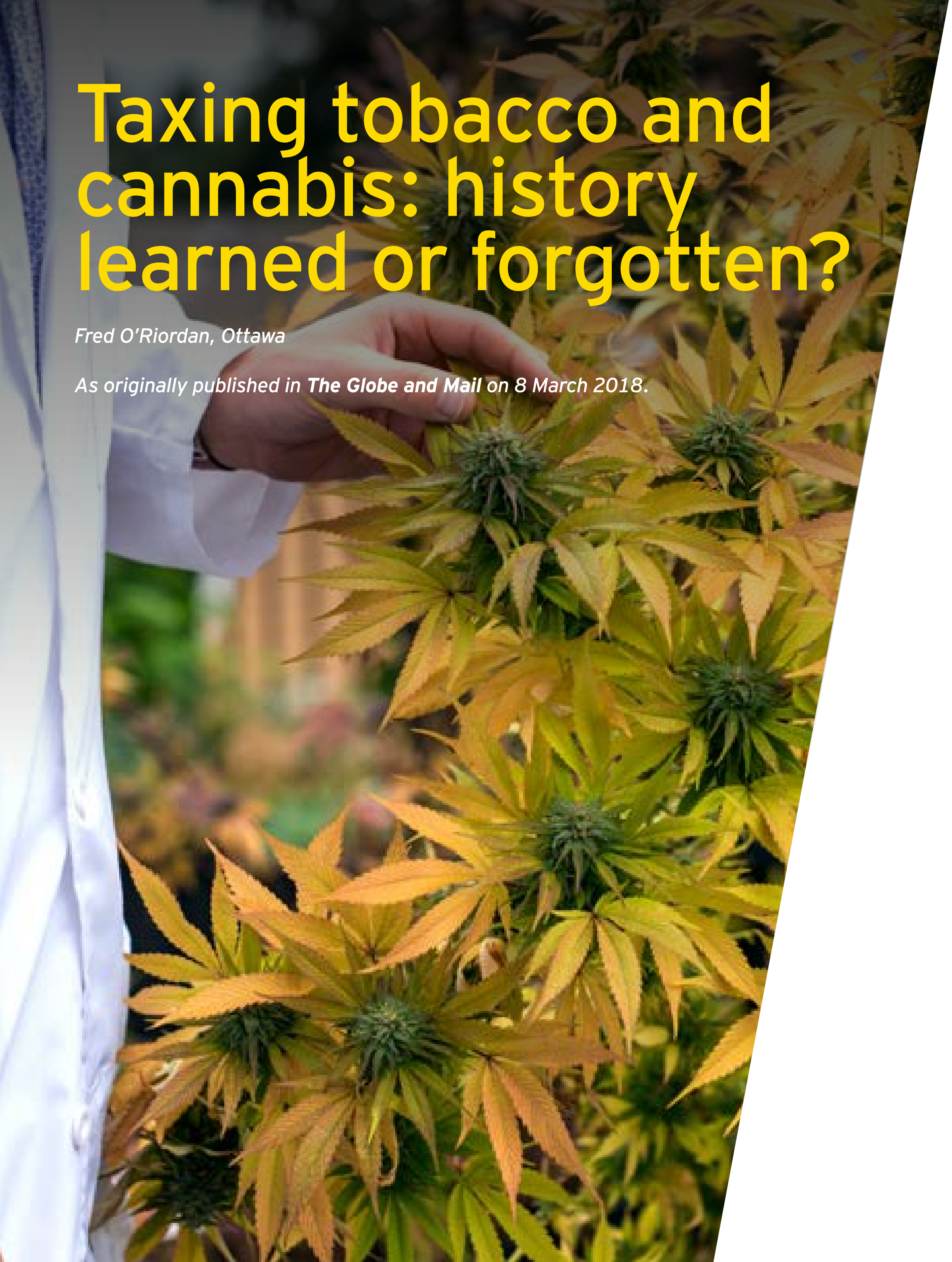
Conclusion

The proposed passive investment income rules are a welcome relief when compared with the complex and punitive approaches outlined in the 18 July 2017 consultation paper. Nevertheless, CCPCs with relatively large income-earning investment portfolios will be impacted adversely. There is still a bit of time before these proposed rules take effect. In the meantime, if your corporation has a passive investment portfolio that may potentially be affected by these proposed rules, it is advisable to meet with your EY advisor to determine how these proposed rules could impact your corporation and whether any planning can be done to mitigate its adverse effects.

Taxing tobacco and cannabis: history learned or forgotten?

Fred O'Riordan, Ottawa

*As originally published in **The Globe and Mail** on 8 March 2018.*



Fred O'Riordan is EY Canada's tax policy leader and a former director-general of excise duties and taxes at the Canada Revenue Agency.

We are only months away from legal cannabis sales in Canada and seeing whether the federal government can achieve its stated twin goals of "keeping cannabis out of the hands of youth and profits from its sale out of the hands of criminals."

A key to success is how to tax cannabis. There is an inevitable and unintended trade-off between keeping the tax low to increase the proportion of total sales that are legal and the desire to set the tax higher to make it less affordable (and, therefore, less accessible) to youth. Set the rate too low and legal access is less restricted. Set it too high and black market sales and profits continue to flourish, undermining the objectives of legalization.

There are encouraging signs the federal and provincial governments have struck the right rate and revenue-sharing balance. Last November, the federal government proposed an excise duty framework for cannabis products and made a 50/50 revenue-sharing offer to the provinces. In December, the provinces agreed to the combined federal-provincial tax rate of the higher of $1 a gram or 10% of the producer's sale price plus HST and agreed in principle to a revised two-year 25/75 federal/provincial revenue split.

Statistics Canada then launched an online crowdsource survey to determine black market prices for cannabis as a guide to pricing competitively to crowd out illegal sales. Whether this strategy is successful, and the current level of cooperation between the federal and provincial governments is sustainable, remains to be seen.

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Examining the history of tobacco taxation in Canada provides a sense of what may happen. Although there are differences between the public policy objectives of legalized cannabis and tobacco, there are striking similarities — in particular, the tax and non-tax measures, such as restrictions over packaging, advertising and public consumption by which governments have chosen to regulate their sale and availability.

The stated objective of tobacco tax policy is to increase rates to reduce the prevalence of smoking. But these taxes are also an important source of revenue for both federal and provincial governments. Some might even see their past actions as a form of tax competition — one side first increasing its own rates, or strategically matching rate increases of the other, in order to preserve or gain a bigger share of the same tobacco "tax pie."

This arguably was a factor in sizable tax increases in the early 1990s that had immediate unintended consequences. The trigger event was a $6/carton federal excise duty increase announced in the 1991 federal budget, quickly matched by provincial increases. The result was a significant price increase and sharp decline in legal tobacco sales. On the surface, it looked like a victory for health advocates.

But the news was too good to be true. Smoking prevalence did not decrease by anywhere near the reduction in legal tobacco sales. The huge price increase created a profit incentive for smugglers of contraband tobacco. Many smokers switched to much lower-priced contraband. In 1994, Statistics Canada estimated it had increased from 1% of the total Canadian market in 1987 to 31% by 1993. In Ontario and Quebec, its share was much higher.

Government authorities responded by ramping up enforcement activity, but couldn't stem the tide of contraband flooding the market. Finally, when things reached the crisis point in 1994, the federal government sharply reduced tobacco taxes, offering to match any provincial decreases up to $5 a carton. This ensured each side would preserve its share of the tax pie. Following this rollback, legal sales bounced back by 50% and contraband sales declined markedly.

This experience almost certainly informed federal-provincial decision-making around cannabis taxation. Sadly, the story for tobacco tax policy does not end there. After a period of calm, the federal government introduced a Federal Tobacco Control Strategy in 2001, resulting in a 68% increase in federal levies over a three-year span from 1999 to 2002. Provinces again increased their taxes more or less in tandem. Sales of contraband rebounded and the black market experienced a resurgence.

One positive takeaway for tax authorities was that gradual, predictable tax increases are preferable to periodic large increases. Sharp spikes in legal prices appear to more strongly influence smokers' propensity to switch to contraband.

As a result, the Harper government announced in its 2014 budget that it would tie future federal tobacco tax rates to the consumer price index, adjusting them every five years. Following this lead, the Ontario Government announced, in its 2016 budget, that it would base its future increases on inflation over the next five years, beginning in 2017.

This apparently coordinated tax arrangement didn't last long. Rather than the expected inflation-adjusted increase in its 2017 budget, Ontario abruptly changed course and announced a massive $10-a-carton increase to be implemented in three stages over a two-year time frame. The federal government responded in the 2018 budget on 27 February 2018 by adding another $2.29 a carton — and accelerating its inflation adjustments to every year instead of every five years.

Whether Ontario's revenue predictions from these increases pan out remains to be seen. Between 2013 and 2017, revenue fell short of its forecasts by $240 million. By some estimates it could fall short by another $235 million a year for fiscal 2018-19 and 2019-20.

The contraband market in Ontario is already estimated at one-third of total consumption and more than 80% of total contraband across Canada. It could grow even larger, meaning less revenue for both federal and provincial governments.

Canadians have reason to expect their governments will do better with cannabis, but their record with tobacco is cause for concern. Revenue from cannabis is projected to be relatively modest initially.

However, if legal sales grow, with the expected entry of new edible products for example, and the resulting tax pie grows with it, all bets are off.

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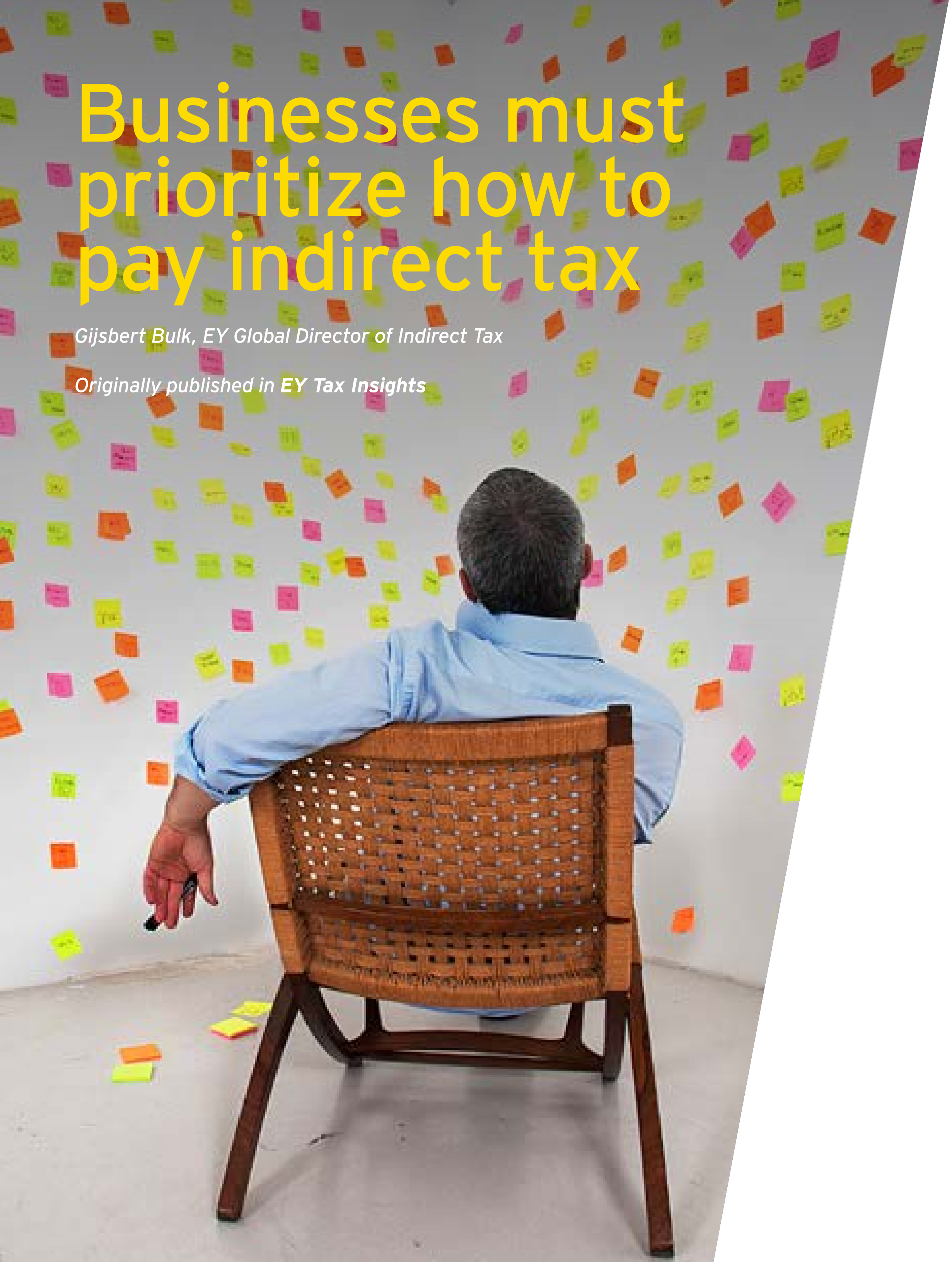

Businesses must prioritize how to pay indirect tax

Gijsbert Bulk, EY Global Director of Indirect Tax

*Originally published in **EY Tax Insights***

The indirect tax world is experiencing an unprecedented era of expansion and transformation, forcing businesses to prioritize how these levies are managed and paid. We began to see the rise of indirect tax at the turn of the millennium, specifically value-added tax (VAT) and goods and services tax (GST), as well as special consumption taxes on items such as cars, cigarettes and alcohol.

Consumption taxes as a percentage of total tax revenue have remained stable across members of the Organisation for Economic Co-operation and Development (OECD), with an average of 30.5% in 2014 compared with 30% in 2004. But these taxes are being applied to an ever-widening range of products and services. Some of the most recent examples include new levies on sugar, carbon emissions, plastic bags and e-cigarettes, along with goods and services sold online.

The compliance burden has expanded in tandem. This represents a significant challenge and risk for the tax function today, considering the wide range of detailed data and technological processes required by each jurisdiction, not to mention the perpetual revisions in indirect tax policies.

All of these developments have led to indirect tax assuming a key role in strategic planning within the tax function. Global businesses need to monitor indirect tax developments closely. And they should be prepared to adapt their transactions, accounting policies and technology to pay and recover the correct amount of tax. (Follow changes to VAT, GST and other indirect taxes with the EY Worldwide Indirect Tax Developments Map.

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Globetrotting tax

While customs duties have been around a long time (in medieval Germany, people paid customs duties to use the roads and bridges), general taxes on goods and services are a modern phenomenon.

France was the first country to introduce a general consumption tax, in this case VAT, in the early 1950s. It took a few decades to catch on — in the late 1960s only 10 countries had introduced a VAT or GST, according to the OECD — but by 2016 some 166 jurisdictions across the world had one.

The OECD calls VAT "among the most important developments in taxation over the last half century." Governments like VAT/GST for a few reasons: it's a stable source of revenue, especially in times of recession; it's efficient to levy in terms of costs and time; and it tends to weigh less on economic growth than other taxes.

Globalization has also boosted the appeal of this tax. As global trade took off in the 1990s and more jurisdictions opened up their borders via free trade agreements, many developing countries introduced a VAT/GST to compensate for lower trade duties and tariffs, according to the OECD.

The adoption of VAT/GST has altered the mix of taxes collected by governments, shifting from specific to general consumption. Excise taxes on specific goods and services declined to 7.6% of total tax revenue, on average, among OECD member countries in 2014 compared with 14.2% in 1965. In contrast, general consumption taxes raised 20.7% of total tax revenue on average among OECD members in 2014, up from 11.9% in 1965.

See how they rise

Recent years have ushered in further changes to indirect tax policies. The 2008 financial crisis and accompanying global recession led to a decline in corporate profits and tax revenue raised by governments. Jurisdictions first responded by addressing corporate tax practices that shrunk their tax revenue. The OECD's base erosion and profit shifting (BEPS) plan, currently being rolled out across the world, is one such initiative.

But attention soon shifted to indirect tax, which proved to be an important tool for governments battling the aftermath of the global financial crisis.

Some countries increased their VAT/GST rates to raise additional revenue. In the European Union, for example, average VAT rates have increased since 2008. Other jurisdictions extended exemptions and reduced rates for additional goods and services.

The spread of VAT/GST to new jurisdictions continues. India introduced its new GST system in 2017, and Saudi Arabia, the United Arab Emirates and other countries within the Gulf Cooperation Council will introduce a new VAT in 2018.

For now, it appears that VAT/GST rates are unlikely to further increase, but will instead stabilize at current high levels or may even decline in some jurisdictions. The only exception is in the area of online goods and services as governments introduce new measures or clarify existing rules to collect indirect tax revenue that has until now largely slipped through the cracks. For example, some countries are abolishing tax exemptions for small online shipments.

The new excise taxes

Excise taxes on specific goods also remain an important source of tax revenue for governments, although they too are evolving. While excise taxes on alcohol, cigarettes and fuel are applied widely across the world, many others vary from market to market, covering everything from chewing gum to jewelry.

New excise taxes are being used to influence consumer behavior, such as sugar taxes on soft drinks to fight obesity or carbon taxes to address pollution.

By using different tax rates or treatments to encourage consumers to switch to "less harmful" versions of some products, excise tax policies can also play a role in stimulating innovation and creating a market for fledgling technologies.

Along with growing compliance requirements, these changes in excise taxes and VAT/GST influence the business itself. A new sugar tax, for example, could affect prices and demand, and ultimately the profitability of the business. Producers and sellers of taxed products may need to innovate or diversify to maintain profitability.

Closing the tax gap

Governments today have other avenues available to collect more indirect tax revenue. When it comes to transactional taxes like VAT/GST and customs duties, vast quantities of data are produced each day. Tax administrations are digitalizing their indirect tax systems to increase transparency and efficiency and reduce errors.

One of the main goals is to narrow the so-called VAT/GST gap — the tax loss to fraud, inefficiencies and other issues. In the UK alone, the VAT gap was estimated at £12.2 billion, or 9.6% of estimated net VAT, in 2015–16.

In some jurisdictions today, taxpayers are expected to submit indirect tax data automatically and electronically. Spain, for example, introduced a new Immediate Submission of Information (ISI) system in 2017, requiring businesses that file VAT returns on a monthly basis to keep their VAT books electronically through the new system. China, Russia and Brazil, which are all wrestling with large VAT/GST gaps, are also successfully deploying digital systems to gather more indirect tax revenue.

Software tools provide another way for tax administrations to identify indirect tax errors, uncover issues with taxpayers' enterprise resource planning (ERP) systems and conduct risk-based audits.

Technology also allows tax and customs administrations to share information, for example through joint risk assessments, which provides them with greater insight and transparency into taxpayer filings.

The right approach

Taxpayers can't afford to lag behind tax administrations in this digital transformation. Investing in technology, including moving to standardized, automated processes instead of relying on manual spreadsheets, will help businesses handle greater quantities of data and comply with more demanding indirect tax reporting requirements.

Such efforts will also help businesses respond more effectively if they come under increased scrutiny by tax authorities. And it should help lower costs for headcount, cash flow, consulting, accounting and compliance.

By digitalizing their indirect tax systems, businesses can gain greater visibility over their indirect tax obligations and risks, including outstanding VAT/GST refunds. In some countries, especially those dealing with significant VAT/GST gaps, obtaining such refunds can be extremely difficult. This waiting game can transform VAT/GST recovery into a significant cost for the business — a risk that eventually is brought to the attention of the C-suite.

Digitalization can also lead to less business disruption. Digitalized tax administrations are moving toward a system in which they will be able to identify and certify taxpayers who are compliant. Tax administrations would no longer have to analyze all taxpayers — compliant and noncompliant — in the same manner. Those deemed "good" would face less scrutiny and fewer audits.

In an era when the popularity of indirect tax keeps rising, the onus is clearly on businesses today to pay greater attention to governments' favourite "child."

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When boards look to AI, what should they see?

Originally published in the ***EY Center for Board Matters***

Artificial intelligence (AI) warrants the board's close attention because it presents opportunities when applied well and risks when applied badly. Organizations that successfully exploit AI can disrupt the market, drive growth and manage their commercial risk. Yet, AI technologies also present serious ethical, legal and programming risks that need to be managed carefully. What's more, AI is poorly understood by business, with many organizations unsure as to when and where they should use it.

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AI as a disruptor

AI can enhance complex decision-making processes, which is why it is a catalyst for transformation in every industry. Not only does it allow onerous and time-consuming tasks to be completed more efficiently and effectively, it can give management teams a depth of insight that was never available before. When AI is combined with big data and analytics, it is an invaluable tool for finance functions that want to better understand their organization's customers or model future scenarios.

A tool for mitigating risk

Machine learning – a form of AI where computer algorithms automatically improve over time through their experience of using data – plays an increasingly prominent role in enterprise risk management. AI can be used to create sophisticated tools to monitor and analyze behavior and activities in real time. Since these systems can adapt to changing risk environments, they continually enhance the organization's monitoring capabilities in areas such as regulatory compliance and corporate governance. They can also evolve from early warning systems into early learning systems that prevent threats to the organization materializing for real.

AI is a rapidly developing area of technology that has yet to reach its full potential. Nevertheless AI can already be used today to mitigate risk in some key areas, including:

Credit risk and revenue modeling

Machine learning supports more informed predictions about the likelihood of an individual or an organization defaulting on a loan or a payment. It can also be used to build variable revenue forecasting models.

Cyber attacks

AI systems can be trained to detect, monitor and repel cyber attacks. They identify software with certain distinguishing features – for example, a tendency to consume a large amount of processing power or transmit a lot of data – and then take action to close down the attack.

Fraud detection

For many years, machine learning has been successfully applied to the detection of credit card fraud. Banks use systems that have been trained on historical payments data to monitor payments for potential fraudulent activity and block suspicious transactions.

Supplier risk

AI-based analytics platforms can manage supplier risk by integrating a host of different information about suppliers, from their geographical and geopolitical environments through to their financial risk, sustainability and corporate social responsibility scores.

Surveillance of conduct and market abuse in trading

Financial institutions use automated systems to monitor their traders by linking trading information with other behavioral information relating to the traders, such as email traffic, calendar items, office building check-in and check-out times and even telephone calls.

Risks related to AI adoption

For businesses, AI is both a tool for managing risk and a source of significant new risks that must be managed.

So, whenever the technologies are implemented, it is important that risks are identified related to each individual AI application and for each business unit that is using the application. Typical risks include poor-quality training data and programming issues, as well as external pressures such as data privacy regulations and meeting customers' expectations.

Some of the main risks associated with AI include:

Algorithmic bias

Machine learning algorithms identify patterns in data and codify them in predictions, rules and decisions. If those patterns happen to reflect some existing bias, then machine learning algorithms are likely to amplify that bias, and may produce outcomes that reinforce existing patterns of discrimination.

Overestimating the capabilities of AI

There is so much excitement about AI that it is easy to overestimate its current capabilities. Since AI systems do not understand the tasks they perform, and rely on their training data, they are far from infallible. The reliability of their outcomes can be jeopardized if input data is biased, incomplete or of poor quality.

Programmatic errors

Errors are a common problem with all computer programs and AI is no exception. Where errors exist, algorithms may not perform as expected and may deliver misleading results that have serious consequences – for example, the integrity of an organization's financial reporting could be compromised.

Risk of cyber attacks

Hackers who want to steal personal data or confidential information about a company are increasingly likely to target AI systems. If they take control of algorithms that make high-stakes decisions, such as driving cars or controlling robots, the impact of an attack could be devastating.

Legal risks and liabilities

At present, there is little legislation governing AI, but that is set to change. Nevertheless, systems that analyze large volumes of consumer data might not comply with existing and imminent data privacy regulations, especially the EU's General Data Protection Regulation (GDPR).

Reputational risks

AI systems handle large amounts of highly sensitive data and are responsible for making critical decisions about individuals in a range of areas including credit, education, employment and health care. So any system that is biased, error-prone, hacked or used for unethical purposes poses significant reputational risks to the organization that owns it.

The policy response

In 2017, the Association for Computing Machinery (ACM) US Public Policy Council and the ACM Europe Council issued a statement outlining a set of principles on algorithmic transparency and accountability.[10] These seven principles are intended to ensure that developers who build systems that make automated decisions abide by the same standards used by human decision-makers.

They are as follows:

1. Awareness
2. Redress
3. Accountability
4. Explanation
5. Data provenance
6. Auditability
7. Validation and testing

Recommendations

Boards should understand how AI technologies are being applied both within the organization and externally. They should ensure that the organization has appropriate structures in place to manage ethical issues and understand how it is addressing the issue of algorithmic bias. They also need to be aware of emerging frameworks, policies and legislation to ensure that their business has the right balance between algorithmic transparency and accountability.

Finally, boards should feel confident in the robustness of their "black box" – the term used to describe a machine learning system. This confidence can be achieved through a thorough review that determines whether the outputs from the system are as expected and whether proper controls exist to monitor these systems as they evolve over time.

Key questions for boards to consider

1. Does the board understand the potential impact of AI on the organization's business model, culture, strategy and sector?
2. How is the board challenging management to respond strategically to both the opportunities presented by AI and the risks associated with the technologies?
3. How is the organization using AI technology and new data sets for governance and risk management? How are the dashboards of the board and the audit committee changing?
4. Does the organization have a talent strategy for recruiting and retaining individuals with the necessary skill sets to manage and staff AI-related projects?
5. Has the board asked management to assess how the adoption of AI impacts the integrity of its finance function or its financial statements?

[10] 1. Statement on Algorithmic Transparency and Accountability, ACM US Public Policy Council and ACM Europe Council, May 2017.

Publications and articles

Tax Alerts - Canada

Tax Alert 2018 No.18 – Québec announces QST and e-commerce measures

Through budget provisions presented on 27 March 2018, the Québec government intends to implement a new mandatory specified registration system for suppliers with no physical or significant presence in Québec to ensure the Québec sales tax (QST) is collected and remitted in the context of the digital economy.

Tax Alert 2018 No. 19 – Prince Edward Island budget

Tax Alert 2018 No. 20 – Saskatchewan budget

Publications and articles

EY's Global Capital Confidence Barometer

The 17th edition of EY's *Global Capital Confidence Barometer* finds that Canadian respondents are still firmly aiming to pursue acquisitions in the next 12 months, and are buoyed by positive momentum in the local and global economies.

EY's Worldwide Personal Tax and Immigration Guide 2017-18

This guide summarizes personal tax systems and immigration rules in more than 160 jurisdictions, including Australia, Brazil, Canada, France, Germany, Mexico, the Netherlands, the Russian Federation, the UK and the US.

EY's Worldwide Capital and Fixed Assets Guide 2017

The *Worldwide Capital and Fixed Assets Guide* helps our clients navigate the rules relating to fixed assets and depreciation. It summarizes the complex rules relating to tax relief on capital expenditures in 27 jurisdictions and territories.

EY's Worldwide Estate and Inheritance Tax Guide 2017

EY's Worldwide Estate and Inheritance Tax Guide summarizes the estate tax planning systems and describes wealth transfer planning considerations in 37 jurisdictions around the world, including Australia, Canada, China, France, Germany, Italy, the Netherlands, the UK and the US.

Worldwide Corporate Tax Guide 2017

Governments worldwide continue to reform their tax codes at a historically rapid rate. Chapter by chapter, from Afghanistan to Zimbabwe, this EY guide summarizes corporate tax systems in 166 jurisdictions.

Worldwide VAT, GST and Sales Tax Guide 2018

This guide summarizes the value-added tax (VAT), goods and services tax (GST) and sales tax systems in 122 jurisdictions, including the European Union.

Worldwide R&D Incentives Reference Guide 2017

The pace at which countries are reforming their R&D incentives regimes is unprecedented. This EY guide summarizes key R&D incentives in 44 jurisdictions, and provides an overview of the European Union's Horizon 2020 program.

2016-17 Worldwide Transfer Pricing Reference Guide

The proliferation of transfer pricing rules and regulations around the world, and the huge increase in focus on the subject by the world's tax authorities, require practitioners to have knowledge of a complex web of country tax laws, regulations, rulings, methods and requirements. This guide summarizes the transfer pricing rules and regulations adopted by 118 countries and territories.

Board Matters Quarterly

The April 2018 issue of Board Matters Quarterly provides an overview of the accounting implications of US tax reform and a preview of the 2018 proxy season. Other articles look at how boards are overseeing strategy in the digital age and what they need to know about the SEC's new guidance on cybersecurity.

EY Trade Watch

This quarterly publication outlines key legislative and administrative developments for customs and trade around the world. Highlights of this issue include: (1) US tariffs on steel and aluminum, (2) Canada's WTO dispute settlement complaint against US trade law remedy practices, (3) New requirements in Mexico to support customs valuation of imported goods, (4) China Customs adopts interim administrative procedure for advance rulings, (5) EU27 develops its approach to post-Brexit arrangements, and (6) UK government introduces new customs bill.

Publications and articles

Websites

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EY's Federal Income Tax Act, 2018 Edition

Editors: Alycia Calvert, Warren Pashkowich and Murray Pearson

Complete coverage of Canada's Income Tax Act and Regulations. Included with this edition: interactive online features and purpose notes for selected provisions. Purchase of a print book includes access to an online updated and searchable copy of the federal Income Tax Act as well as the PDF eBook. This edition contains amendments and proposals from the February 27, 2018 federal budget tax measures, Bill C-63 (SC 2017, c. 33), Budget Implementation Act, 2017, No. 2, the December 13, 2017 amendments to the Income Tax Act and Regulations (income sprinkling), and the October 24, 2017 notice of ways and means motion.

EY's Guide to Preparing 2017 Personal Tax Returns

Editors: Lucie Champagne, Maureen De Lisser, Gael Melville, Yves Plante, Alan Roth

This is the line-by-line guide busy tax professionals rely on throughout the tax season. The guide includes a summary of what's new for the 2017 taxation year as well as tips, suggestions and reminders to consider when preparing 2017 personal tax returns. Available as an easy-to-use and searchable internet collection (includes access to four years of previous internet editions).

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