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Taxing capital gains: Country experiences and challenges

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Taxing capital gains

Country experiences and challenges

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The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Table of contents

FIGURES

TABLES

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Abstract

This paper examines OECD countries' experiences in taxing capital gains, analysing the rationales, challenges, and implications of offering more favourable tax treatment to capital gains compared to other forms of income. Most OECD countries tax capital gains upon realisation, usually at lower rates or with exemptions, and often offer additional relief for specific assets such as housing or closely-held businesses. While some arguments for favourable capital gains tax treatment – such as compensating individuals for double taxation or the taxation of inflationary gains – present a stronger case, evidence supporting other justifications, such as promoting investment and entrepreneurship, remains mixed. In practice, current capital gains tax systems often undermine equity, introduce economic distortions, and constrain revenue-raising potential. Alternative approaches, including targeted relief measures and adjustments to the realisation basis of taxation, can address some of these challenges but require careful evaluation of their trade-offs. This paper lays the groundwork for evaluating potential policy reforms.

1 Introduction

The taxation of capital gains is an area of growing interest in OECD countries. The favourable tax treatment of capital gains is a long-standing feature of many tax systems, reflecting enduring views about its role in fostering economic growth. At the same time, with asset prices booming in recent years, and much of this growth accruing to individuals at the top of the income and wealth distributions, the role of capital gains tax design in reducing effective tax rates at the top is becoming increasingly apparent. In many countries, policy makers face the challenge of addressing income and wealth disparities while balancing other objectives such as supporting investment and growth. This has led to calls to reassess current capital gains tax systems.

This paper is part of broader OECD work on the taxation of wealth and capital income. The OECD has released a series of reports on the taxation of household savings (OECD, 2018[1]), net wealth (OECD, n.d.[2]), inheritances (OECD, 2021[3]) and housing (OECD, 2022[4]). It has also explored how the taxation of labour and capital income differs across countries (Hourani et al., 2023[5]) and how these tax differentials can encourage tax arbitrage behaviours (Zawisza et al., 2024[6]). This paper complements previous work by focusing on capital gains taxes paid by individuals.

This paper examines the taxation of capital gains in OECD countries and assesses the rationales and effects of existing capital gains tax systems. It shows that OECD countries typically tax capital gains upon realisation, and many apply lower tax rates on capital gains than on other forms of income or provide tax relief via exemptions. Different rationales are put forth to justify preferential capital gains taxation, but some of the arguments lack strong supporting evidence. Furthermore, when evidence shows that tax relief does achieve certain policy objectives, it may not always be the most effective approach. The favourable tax treatment of capital gains can also have adverse revenue, equity, and efficiency effects.

In light of these challenges, the paper discusses alternative approaches to taxing capital gains. These include more targeted forms of capital gains tax relief (e.g. inflation indexation, a rate of return allowance, spreading of capital gains, rollover relief), as well as adjustments or alternatives to taxing gains upon realisation (e.g. deemed realisations of capital gains upon certain events, retrospective taxation, and accrual-based taxation) to reduce lock-in effects and tax minimisation opportunities. The paper outlines the pros and cons of these various approaches.

The paper proceeds as follows. Section 2 provides context for the growing interest in capital gains taxation, discussing the recent trends and distribution of capital gains in OECD countries. Section 3 discusses how OECD countries tax capital gains, focusing in particular on tax rates, exemptions, holding periods, loss offsets, and taxation upon death or departure from a jurisdiction. Section 4 assesses the rationales for favourable capital gains tax treatment with reference to recent academic findings. Section 5 discusses the main challenges arising from favourable capital gains taxation. Section 6 discusses alternative approaches to taxing gains. Section 7 summarises key findings and concludes with a discussion of policy considerations and further OECD work on the topic.

2 Capital gains trends and distribution in OECD countries

Capital gains arise from the increase in the value of assets, such as publicly-held stocks, closely-held businesses or real estate, from their acquisition price. A capital gain is said to accrue when an asset appreciates in value and to be realised when an asset is sold. Assets can appreciate for different reasons, and capital gains may represent a mix of returns to risk-taking and human capital, as well as economic rents (Box 1).

Box 1. Drivers of capital gains

Different factors can drive capital gains:

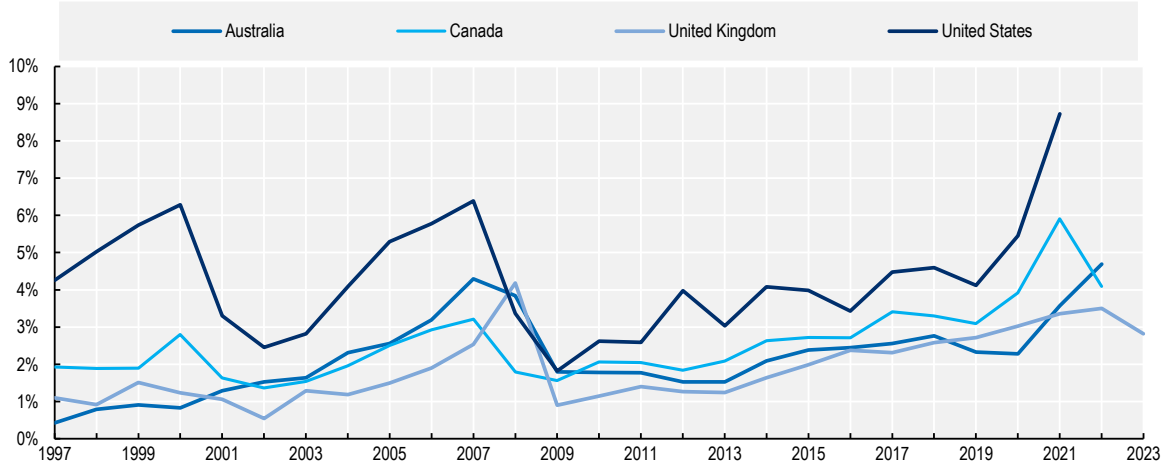
- **Retained earnings** can increase the value of shares held within a business.
- Increases in value may be driven by an **anticipation of increased future profitability**. This may be linked to the development of new products or production processes. In some cases, it may also reflect growing market power.
- **Maintenance or improvement** can enhance the value of assets like properties, vintage cars, and collectables.
- Gains can be generated by **tax avoidance strategies**, such as reclassifying labour income as capital gains to benefit from lower tax rates.
- **Share buybacks** reduce outstanding shares, potentially increasing stock prices. Between 2012 and 2022 buybacks from public companies worldwide have almost tripled (Scheid and Dholakia, 2023[7]).
- **Speculation** may also drive up asset prices and capital gains, although these effects may be temporary if a price correction occurs.
- **Public investment,** including infrastructure or community developments, can increase the values of nearby properties due to enhanced accessibility or amenity.
- **Macroeconomic factors and regulatory policies** such as fiscal stimulus, interest rate changes, and real income growth can impact asset values. Other factors such as migration or planning restrictions may also affect housing values.

Asset prices have grown in OECD countries, driving large increases in wealth. The Global Wealth Report 2023 estimates that global average private wealth per adult rose by 8.3% annually over the past two decades (UBS, 2023[8]). Recent studies have also shown that rising asset prices have driven increases in household wealth more than active saving (see, for example, Bangham and Leslie (2020[9]); Blanco,

Bauluz and Martínez-Toledano (2020[10]), Fagereng et al. (2019[11])). However, whether recent trends will persist in the future is uncertain.

Realised capital gains have increased in many OECD countries. Among the countries shown in Figure 1, realised capital gains have fluctuated significantly between 1997 and 2023, representing between 1% and 8.7% of GDP. However, realised capital gains have been increasing as a share of GDP since the Great Recession. In the United States, realised gains reached the equivalent of 8.7% of GDP in 2021, their highest level in more than 40 years.

Figure 1. Realised capital gains from individuals, as a proportion of GDP



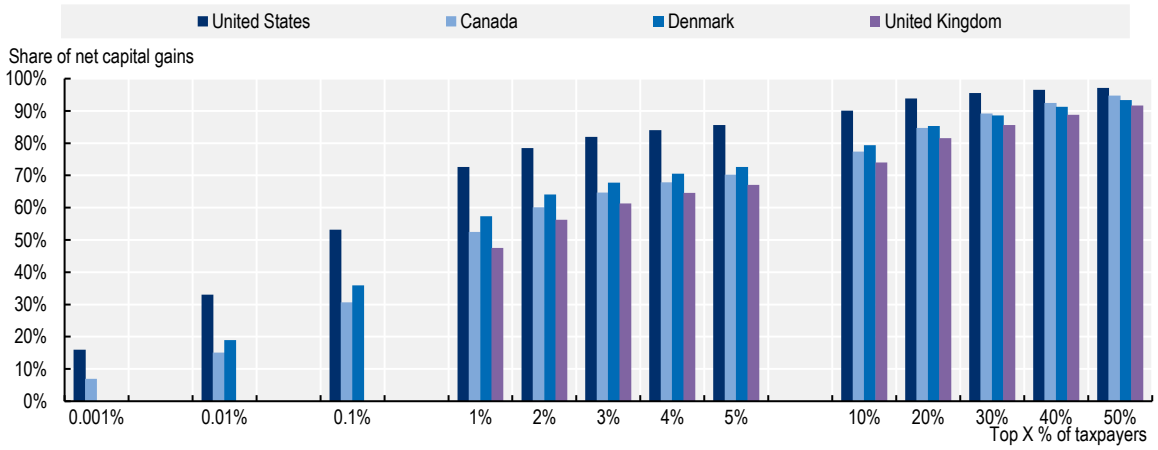
Note: Prior to 2009, data for the United Kingdom show gains as calculated in Advani and Summers (2020[12]), while HMRC statistics are used from 2009 onwards. The data from Advani and Summers (2020[12]) primarily differ from HMRC statistics which record gains after taper relief and indexation allowances, policies which reduce the gains on which tax is due. Further detail is available at Advani and Summers (2020[12]).
Source: CBO (2023[13]); Advani and Summers (2020[12]); HM Revenue & Customs (2024[14]); Minas, Minas and Lim (2023[15]), Australian Taxation Office (2024[16]), Canada Revenue Agency (2024[17]).

New research shows that realised capital gains are disproportionately concentrated among top earners. In the United Kingdom, 41% of capital gains taxes from 2022-23 were paid by the top 1% of capital gains taxpayers (HM Revenue & Customs, 2024[18]). Capital gains themselves are even more concentrated, with the top 5 000 taxpayers in the United Kingdom receiving more than half of all taxable gains in 2020 (Advani, Lonsdale and Summers, 2024[19]), and in 2017-18, most gains were realised by individuals with gains over GBP 1 million (Corlett, Advani and Summers, 2020[20]). Gains above GBP 1 million were also the main driver of the rise in overall gains since 2008-09 (Corlett, Advani and Summers, 2020[20]). Tax statistics for the United States and Canada similarly show that individuals in the top 0.1% of the income distribution realise an outsize share of net capital gains in the economy (around 50% for the United States and 30% for Canada) (Figure 2).[1] Research from Australia shows that 0.89% of taxpayers with capital gains accounted for 29% of all gains (Minas, Minas and Lim, 2023[15]) and analysis for Italy shows that financial capital gains play an important role at the top of the distribution (Acciari,

[1] However, evidence from the United States shows considerable turnover in top income groups. For example, 41% of individuals in the top 1% in 2005 were there in 2010 and only 25% were there in all years from 2005 to 2010 (Auten, Gee and Turner, 2013[143]). Within the top 1%, the income of the top 0.01% in a given year tended to decline the most in the following years (Auten and Gee, 2009[144]). However, as discussed below, evidence from the United Kingdom and Canada shows that many individuals who receive capital gains commonly do so on a recurrent basis.

Alvaredo and Morelli, 2024[21]). Carried interest, which is taxed as capital gains in many countries, is similarly concentrated at the top.[2] [3]

Figure 2. Distribution of realised capital gains, selected OECD countries



Note: Chart shows selected countries with available data. Data represent the years 2021 for Canada, 2021 for Denmark, 2020 for the United States, and 2016-2017 for the United Kingdom. Taxpayer percentile for the United States is measured by adjusted gross income, which is defined as gross income (including wages, dividends, capital gains, business income, retirement distribution, other) minus adjustments (such as educator expenses, student loan interest, alimony payments or contributions to a retirement account). Taxpayer percentile for Canada is based on taxable income. Canada's capital gains taxation data is net of the lifetime exemption that is available to eligible individuals. Data for Denmark reflect realised capital gains from sales of stock and shares from privately or publicly traded companies only and excludes gains from other asset classes such as real property. Taxpayer percentile for the United Kingdom is measured using fiscal (taxable) income, which excludes capital gains. Data for the United Kingdom were not available for percentiles below the first percentile.
Source: Internal Revenue Service (2022), Statistics of Income, "Number of Returns, Shares of AGI, Selected Income Items, Credits, Total Income Tax, AGI Floor on Percentiles, and Average Tax Rates," Table 4.3 https://www.irs.gov/statistics/soi-tax-stats-individual-income-tax-rates-and-tax-shares#Early%20Release (accessed on September 26, 2023) ; Canada Revenue Agency (2024[17]); Danish Ministry of Taxation; Advani and Summers (2020[12]).

Accounting for realised capital gains increases measures of income inequality. Since realised capital gains largely accrue to those at the top of the income distribution, including capital gains in measures of inequality leads to higher income inequality estimates. Advani and Summers (2020[12]) find that in the United Kingdom, when relying on income that excludes capital gains, income shares appear largely constant since the late 1990s, but including gains reveals a sustained rise in top income shares over the past decade. Including capital gains also changes the composition of the top 1% – those newly counted in

[2] Carried interest is a form of compensation involving the transfer of a profit share from limited partners (fund investors) to general partners (fund managers), typically through a private equity fund. The profit share is generally calculated as a percentage of fund profits exceeding a fixed hurdle rate, payable upon the liquidation of the fund and in addition to management fees. This share of profits is treated as a capital gain rather than labour income in some countries, while in others it may be treated as employment income, although exemptions may apply. The extent to which carried interest should be taxed more like labour or capital income remains a matter of debate, since fund managers who receive an allocation of carried interest from equity funds are often argued to receive a return on investment management services, a form of labour effort.

[3] In the United Kingdom, for example, 6 440 individuals reported carried interest between 2017 and 2023, but total carried interest exceeded GBP 22 billion. In 2020, the top 100 executives received an average of GBP 15 million in carry each (Advani et al., 2024[142]).

the top 1% are more likely to be business owners, older, and female[4] (although women still comprise less than half of individuals earning capital gains) (Advani and Summers, 2020[12]). Although it has been argued that capital gains can make average individuals temporarily appear to be top earners, research has found that many top earners receiving capital gains are still at the top of the income distribution without those gains and in years other than the realisation year (Advani, Summers and Corlett, 2020[22]), (Smart and Hasan Jafry, 2022[23]). Recent analysis on realised capital gains in Canada has also found that most individuals realising gains who are classified as top earners would continue to be classified as such after excluding capital gains from individuals' taxable income.[5]

Evidence suggests that some taxpayers realise recurrent gains, and the frequency of realisation can vary by asset type. A recent study has found that many taxpayers who receive gains in the United Kingdom do so on a recurrent basis – for instance, of individuals receiving gains in a 10-year period, almost one in eight received gains at least five times (Advani, Lonsdale and Summers, 2024[19]). The study also found that average gains increase with the frequency of gains. Other analysis by the Canadian authorities finds that whether realisations occur on a recurrent basis vary by the type of asset owned.[6] For example, personal property (e.g. residences, automobiles, boats, jewellery) and business property (e.g. qualified small business corporations) are generally disposed of in whole as one-time events after long periods of accrual. On the other hand, most individuals who reported gains and losses on portfolio investments (e.g. bonds, shares, and gains flowing from investment vehicles) did so over multiple years.[7] Furthermore, the analysis found that of individuals in the top 10% or 1% of taxable income who reported capital gains, over 30% reported gains in five or more years over the 10-year period analysed.

There are fewer studies exploring the distribution of unrealised capital gains, but the evidence suggests they are also heavily concentrated among top income and wealth households. Research from the United States estimates that about 70% of all unrealised capital gains can be attributed to the highest income decile (Figure 3), and this percentage is even higher if gains from homes are excluded.[8] Furthermore, even among high-income and wealthy households, the distribution of gains is uneven – approximately 10% of all gains are held by the wealthiest 400 Americans (Gravelle, 2022[24]). A study on Norway provides indirect evidence of the distribution of unrealised capital gains by comparing savings rates across the wealth distribution between 2005 and 2015 (Fagereng et al., 2019[11]). Net savings, measured as the average annual change in household assets, holding asset prices constant, are relatively uniform between the 20th percentile and the top of the wealth distribution. In contrast, when accounting for asset price changes (gross savings), the savings rate increases strongly with wealth. These findings imply that unrealised capital gains are concentrated at the top of the Norwegian wealth distribution.

[4] The mechanisms leading to this result need to be better understood as they may in part reflect intra-household income shifting (Advani and Summers, 2020[12]) .

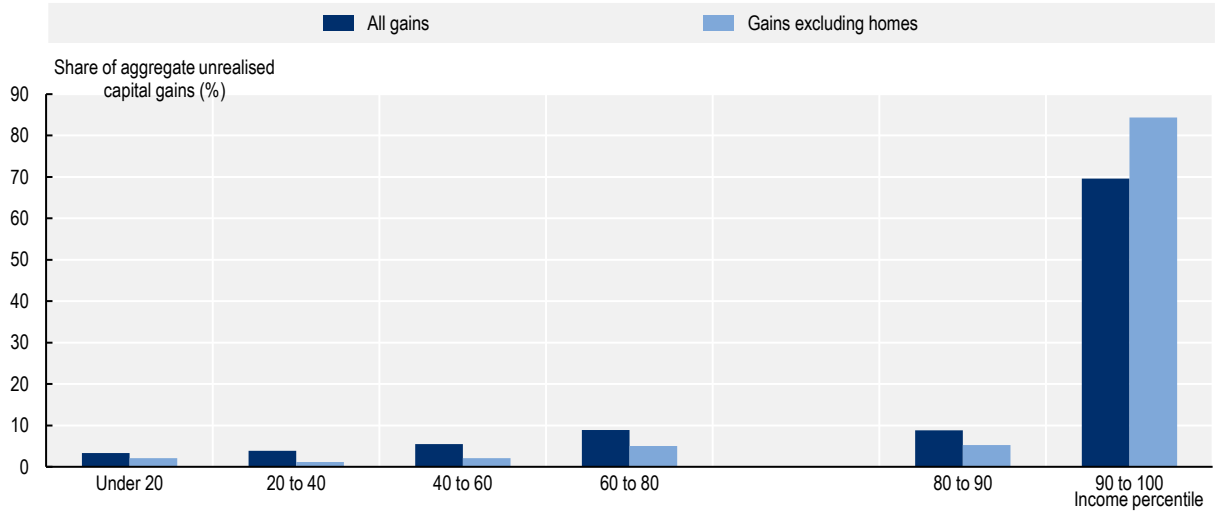
[5] The same result persists if accrued gains are included in the calculation of income. Information provided to the OECD by Canadian delegates to OECD Working Party 2.

[6] Information provided to the OECD by Canadian delegates to OECD Working Party 2.

[7] The analysis finds that some 30% and 44% of individuals who reported gains and losses on shares and from investment vehicles (but only 7% of those who reported gains and losses on bonds) reported series of recurrent gains and losses. Observed series of recurrent gains were also found to be relatively long, with about half of the series spanning nine years or more, and intervals between years when gains/losses are reported were also shorter than for other sources.

[8] The data exclude unrealised capital gains held in retirement savings accounts that are more equally distributed due to limits on contributions to those accounts.

Figure 3. Aggregate unrealised capital gains by income percentile in the United States, 2019



Note: The graph shows estimated unrealised gains for financial (e.g., bonds and stocks) and non-financial (e.g., residential homes) assets held by households, sorted by income percentile. 'Gains Excluding Homes' excludes the share of gains that are attributable to appreciations of real residential property.
Source: Chart data draws on Table 9 of Gravelle (2022[24]), which is based on Survey of Consumer Finance data "Unrealized Gains by Income Percentile," Interactive Chartbook, https://www.federalreserve.gov/econres/scfindex.htm and the Urban Brookings Tax Policy Center, Unrealized Capital Gains, https://www.taxpolicycenter.org/statistics/unrealized-capital-gains.

Business assets account for a significant share of capital gains at the top of the income and wealth distributions. Research from the United Kingdom finds that most realised gains come from private businesses. Financial assets account for 79% of the value of all realised gains (HM Revenue & Customs, 2024[25]), with the majority being unlisted shares, which represent 69% of the value of all realised gains (Advani, Lonsdale and Summers, 2024[19]). Estate tax data from the United States show that in 2010, among large estates (USD 20 million and more), most unrealised gains (81%) were from corporate and non-corporate business shares (30% from publicly traded stock, 36% from private stock, and 15% from other business assets). Estimates based on recent survey data similarly find that among individuals with at least USD 50 million in net wealth, business shares account for about 90% of unrealised gains, with 65% being from private stock and 25% from publicly listed stock (Saez, Yagan and Zucman, 2021[26]). In some countries, data on the composition of wealth similarly shows a concentration of business assets, in particular of closely-held and unlisted businesses, at the top of the distribution (Rijksoverheid, 2022[27]) (Bastani and Waldenström, 2023[28]), suggesting that such assets account for significant shares of realised and unrealised gains among the wealthiest households.

3 Tax treatment of capital gains in OECD countries

This section provides an overview of capital gains tax design in OECD countries. It examines key features of capital gains taxation, including tax rates and how they have evolved over the past 20 years, the tax treatment of specific assets[9], holding periods, the tax treatment of losses, taxation upon death, and taxes levied on unrealised gains when individuals leave a country (exit taxation).

This section shows that capital gains typically benefit from favourable tax treatment compared with other sources of income. First, capital gains are typically taxed on a realisation basis.[10] Many countries also tax capital gains at lower rates than other forms of personal income, in particular labour income, or exempt a portion of capital gains. Some countries provide additional relief for specific assets, particularly for real estate and small or closely-held businesses. Some also allow accrued capital gains to escape taxation upon death or tax residence change. Another common feature across countries is that most countries tax nominal capital gains, with the exception of Mexico, Chile, and Israel, which explicitly adjust some capital gains for inflation.

3.1. Tax regimes and rates

Most OECD countries tax capital gains more favourably than other forms of income, but approaches vary. OECD countries often tax capital gains separately from labour income, most commonly at flat rates (possibly with other capital income) or at progressive rates, which tend to be lower than the rates levied on labour income (Table 1). Some countries tax capital gains with other personal income but provide relief such as partial exemptions. For example, both Australia and Canada have provisions that effectively exempt half of taxable capital gains from taxation.[11] Most countries that levy social security contributions on labour income do not do so for capital gains. While some countries tax all forms of capital income under the same tax rate schedules, in most cases capital gains are effectively taxed more

[9] A detailed summary is available at Annex A. This paper does not consider the taxation of capital gains on assets held in retirement savings accounts, which are available at OECD (2018[120]).

[10] Accrual-based taxation can apply in certain contexts in some countries. In the United States, for example, the accrual basis of taxation applies to securities dealers' holdings and to commodity futures contracts (for a discussion, see Toder and Viard (2016[116])). Australia recently introduced a reform that, if legislated, would tax unrealised capital gains in high value retirement accounts. The Netherlands also has a system of deemed returns on an asset that intends to capture both realised and unrealised gains (see also section 6.2.3). New Zealand taxes gains (and deducts losses) on financial arrangements on an accrual basis (subject to certain thresholds) and taxes portfolio investment in foreign shares on a deemed rate of return basis.

[11] Canada's Budget 2024 proposed increasing the inclusion rate to 66.7% of capital gains realised annually above CAD 250,000 by individuals on or after June 25, 2024. On January 31, 2025, the Government of Canada proposed to defer the increase in the inclusion rate to January 1, 2026. At the time of writing, no change to the capital gains inclusion rate has passed into law.

favourably since individuals realising capital gains benefit from the deferral advantage of taxation (further discussed in section 4.2). Finally, some countries exempt all or most capital gains.

Table 1. Capital gains tax regimes, 2023

Classification based on the tax treatment of publicly-traded shares

Tax treatment	Countries
Taxed with other personal income	Australia[1], Canada[1], Chile[4, 5], Czechia[6]
Separate capital gains tax – flat rate	Austria[2], Colombia, Costa Rica, Estonia[7], France[1,2], Germany[2,4], Greece, Hungary[7], Iceland[4], Ireland[4], Israel[4,5], Italy, Japan, Latvia, Mexico[5], Norway[4], Poland, Portugal[2], Slovenia[6], Sweden
Separate capital gains tax – progressive rates	Denmark, Finland[4], Lithuania[4], Spain, United Kingdom[4,9], United States[9]
Exempt	Belgium[3], Korea[4,8], Luxembourg, New Zealand[10], Slovak Republic, Switzerland[3], Türkiye
Other	Netherlands

Notes: Further detail is available at Annex A. Classifications based on the tax treatment of publicly-traded shares, assuming the individual realising a gain is not a majority shareholder in the company whose shares have been sold and that shares were held for the long term. Long-term capital gains are assumed to be held for a time period that attracts the long-term capital gains tax treatment for the relevant country. Comparisons with taxation of labour income consider the combined taxation of central and sub-central governments. 1. A percentage of capital gains is exempt from taxation. 2. Individuals can choose between taxation at flat rates or taxation under the same progressive tax rate schedule as wage income. However, exemptions may apply to income if individuals opt for taxation under progressive tax rate schedules (e.g., France, Portugal). 3. Tax treatment may depend on whether assets are held in a professional or personal capacity. 4. Only gains above a threshold are taxed, or a fixed deduction applies. 5. Explicit inflation adjustments apply. 6. Exemptions apply after a holding period. 7. A flat tax applies to both labour income and capital gains income. 8. Minority shareholders are exempt from capital gains tax when trading listed shares on the exchange. 9. The United Kingdom and the United States tax income on a comprehensive basis but apply different tax rates to labour income and long-term capital gains. 10. Exempt except foreign (excl. Australia) publicly-traded shares, which are taxable under a deemed rate of return method.

The top tax rate on capital gains rose in some countries and fell in others in the past two decades, with different impacts on the gap between the top tax rate on capital gains and on wages. Figure 4 shows personal-level top tax rates on capital gains from domestic shares[12] without taking into account any corporate income taxes (CIT) paid on corporate profits or full or partial exemptions where they apply. Between 2000 and 2021, 19 countries increased their top tax rates on long-term capital gains and 15 increased their top tax rates on short-term gains. Some countries started taxing long-term capital gains during that period (e.g., Austria (2012), Czechia (2014), Germany (2009), Israel (2003)). On the other hand, nine and 14 countries lowered their top tax rates on long-term and short-term capital gains respectively over the same period. As a result of these changes in top capital gains tax rates as well as changes in top tax rates on wages, a number of countries saw a reduction in the gap in tax rates between labour income and long-term capital gains (23 for long-term gains and 18 for short-term gains). On the other hand, the gap increased in 10 countries for long-term capital gains and in 13 for short-term gains. The gap widened the most in the United Kingdom, the Slovak Republic (long-term gains), and Slovenia, where the top tax rate on capital gains decreased significantly.[13]

[12] Tax rates refer to those that apply to domestic shares held by shareholders without a significant stake or active role in the company's operations.

[13] The gaps in Slovenia and the United Kingdom were slightly lower in 2021 compared with some other times periods shown in Figure 4.

Figure 4. Trends in the top tax rate on wage income and capital gains

Note: The top tax rate on wage income shows the combined (central and sub-central) top marginal statutory personal income tax rate inclusive of surtax (if any), before taking into account tax credits and tax allowances. The top tax rate on short-term capital gains applies to shares in a domestic incorporated firm that have been held for less than one year for a shareholder that does not have a significant shareholding or participate in running the business. The tax rate of long-term capital gains corresponds to the tax treatment of capital gains on shares in a domestic incorporated firm that have been held for at least one year by a shareholder that does not have a significant shareholding or participate in running the business. Some countries may be subject to lower rates or exemptions after a holding period of greater than one year. Zero tax rates on capital gains indicate untaxed gains.
* The presented top statutory tax rates on capital gains for Australia and Canada do not account for their respective 'discount' or 'inclusion rate' provisions that effectively exempt a significant portion of capital gains from taxation.
The top tax rate on capital gains in Türkiye refers to gains from stocks traded on the Istanbul Stock Exchange. The top tax rate on capital gains in Poland for the years 2000-2003 refers to gains from publicly traded shares. The tax rates in Belgium and Switzerland assume that the investor is a private investor and not a professional investor (which in practice is determined with reference to criteria such as holding periods, capital gains percentage of income, etc.). The Netherlands is excluded from the chart as it taxes deemed returns on capital rather than realised capital gains (see section 6.2.3). Where taxes by sub-central governments apply, the chosen representative jurisdiction is the same as that used for the OECD Taxing Wages publication.
Source: OECD Data Explorer: *Personal income tax - top statutory rate and marginal tax rate for employees at the earnings threshold where the top statutory personal income tax rate first applies*, OECD WP2 delegate responses to the Questionnaire on Top Income and Wealth Taxation.

3.2. Tax treatment of specific assets

Countries commonly provide more favourable capital gains tax treatment to housing assets, particularly owner-occupied housing, compared with other assets. Most OECD countries fully and unconditionally exempt capital gains from the sale of main residences, while full exemptions and other favourable tax treatment are available in additional countries upon conditions. Chile, Israel, Korea, and the United States exempt gains on main residences up to a cap, while Sweden taxes a proportion of the capital gains. Capital gains on other housing assets are taxed in most OECD countries, though again often at concessionary rates subject to a minimum holding period. Taxpayers can benefit from at least a partial tax exemption on gains on secondary residential properties conditional on a holding period in many countries (e.g., Australia, Belgium, France, and Germany), a capped exemption (Chile) or other tax reliefs (Costa Rica and Portugal) (for more information, see Annex A and Annex tables A.1 and A.2 of OECD (2022[4])).

Table 2. Capital gains tax exemptions for residential property in OECD countries

Country	Owner-occupied residential property	Secondary residential property
Full exemptions can apply	Australia, Austria, Belgium, Canada, Colombia[4], Czechia[1], Costa Rica, Chile[2,4], Denmark, Estonia, Finland[1], France, Germany[1], Greece, Hungary[1], Iceland, Ireland, Israel[2,3] , Italy, Korea[1,3], Latvia[1], Lithuania[1], Luxembourg, Mexico[4], Netherlands, New Zealand, Norway, Poland[1] , Portugal, Slovak Republic, Slovenia, Spain[5] , Türkiye, United Kingdom, United States[1,4]	Belgium[1], Chile[2,4], Czechia[1], France[1], Germany[1], Greece, Hungary[1], Iceland[4], Italy[1], Lithuania[1], New Zealand[1], Poland[1], Slovak Republic[1], Slovenia[1], Türkiye
Only partial exemptions may apply	Sweden	Australia[1], Canada, Israel, Portugal, Sweden

Note: Further detail is available at Annex A. 1. Subject to holding periods. 2. Explicit adjustment for inflation. A detailed description is available at Annex A. 3. Relief may be subject to maximum sale price limits. 4. Relief subject to limit on size of capital gain. 5. Full relief may be conditional on age criteria.
In Switzerland, every canton levies capital gains tax, with different rules on exemptions and holding periods across cantons. Ireland and Costa Rica exempt a small amount of gains on rented residential properties.
Source: OECD (2022[4]), OECD Secretariat desk research

Some countries provide additional capital gains tax relief for sales of closely-held businesses, but the design and generosity of these provisions vary across countries. These reliefs may take the form of additional exemptions (e.g., Australia, Canada, France) or lower tax rates (e.g., the United Kingdom and Ireland) (Table 3). Eligibility criteria vary across countries. Some countries have requirements related to minimum holding periods (e.g., Canada, France, the United Kingdom) or minimum ownership (e.g.,

Australia, Ireland), while others require that the seller performed a managerial role in the business before sale (e.g., France, Ireland). Some specifically provide for relief on asset disposals by retiring individuals (e.g., Australia, France, Ireland). Some reliefs are capped on a lifetime basis (e.g., Canada, Ireland, the United Kingdom). Some countries have seen recent changes to their relief provisions. For instance, in the United Kingdom, the lifetime cap for business asset disposal relief was reduced from GBP 10 million to GBP 1 million in 2020.

Table 3. capital gains tax relief for closely-held businesses, selected OECD countries, 2023

Country	Description of tax relief	Holding period	Eligibility conditions	Lifetime limits
Australia	Relief for the sale of active assets can include a 50% active asset reduction (further to the existing 50% discount) as well as complete exemptions for the sale of small businesses held for 15 years or sold at retirement.	The asset being sold must have been an individual's active asset for at least 7.5 years (if owned for more than 15 years) or half of the test period (if owned for 15 years or less).	Total value of an individual's capital gains tax assets must not exceed AUD 6 million OR Individual must have annual turnover less than AUD 2 million. Individual must own at least a 20% stake in the company.	None
Canada	Capital gains over the 50% inclusion rate are exempt from taxation up to a lifetime limit.	2 years	Must be a qualifying small business corporation (qualification criteria include share of business in Canada).	CAD 971 190
France	Different schemes provide full or partial exemptions for the sale of small business assets up to certain limits. Full exemptions upon retirement may also be available.	5 years	Eligibility criteria typically refer to the individual's roles in the business (e.g., individual entrepreneur, partner, etc.) and the size or turnover.	None
Ireland	Entrepreneur's Relief provides for a favourable capital gains tax rate of 10% on gains from the disposal of qualifying business assets. Retirement Relief provides a full or partial exemption from capital gains tax for disposals by retiring individuals.	3 years for Entrepreneur's Relief	Minimum ownership share applies (typically 5%). Individual must have been a director or employee of company or was required to spend not less than 50% of time in service of the company. Retirement relief refers to age (55 years) or health conditions.	EUR 1 000 000 for Entrepreneur's Relief Retirement relief can be capped or vary depending on the type of disposal and value of the asset.
United Kingdom	Business Asset Disposal Relief provides a lower flat tax rate of 10% on the sale of a business.	2 years	If selling part of their business, individuals must be sole traders or business partners. If selling shares or securities, for at least two years before sale, the individual (who must be an employee or office holder) must own at least 5% of shares or voting rights.	GBP 1 000 000
United States	Gains from the sale of Qualified Small Business Stock are tax-exempt up to the greater of a cap ($10 million) or 10 times the taxpayer's adjusted basis in all qualified small business stock issued by that firm and sold or exchanged by the taxpayer during that year.	5 years	The stock must be purchased at the time of issue, assets of the corporation cannot exceed $50 million including the value of stock issued. Limits apply to eligible industries. A 5-year holding period requirement applies. The investor cannot be a corporation.	Varies

Note: Further detail is available at Annex A.

3.3. Holding periods

Many countries have holding period requirements for assets to qualify for favourable tax treatment. For capital gains on publicly-traded shares, most OECD countries do not condition capital gains tax treatment upon holding periods (Table 4). Of those that do, holding periods apply to eligibility for preferential tax treatment such as lower tax rates or exemptions, and these periods can vary between countries. Two countries increase exemptions (France) or apply lower rates (Slovenia) with longer holding periods. Compared with publicly-traded shares, holding periods are generally more common for tax relief on gains on closely-held businesses (Table 3). Several countries also condition tax relief for housing assets on holding periods. Of the countries that levy capital gains tax on housing assets, eight and ten countries provide for full or partial relief subject to a holding period for owner-occupied and secondary residential properties, respectively.

Table 4. Holding periods for shares in OECD countries, 2023

Holding period	Countries
No differential tax treatment based on duration of ownership	Austria, Canada, Chile, Costa Rica, Denmark, Estonia, Finland, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Lithuania, Korea, Latvia, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, United Kingdom
Less than or equal to 1 year	Australia, Luxembourg (6 months), Slovak Republic
Greater than 1 year	Czechia (3 years), Colombia (2 years), Türkiye (2 years), United States
Different holding periods apply for different exemption levels.	France, Slovenia
Does not tax capital gains on shares	Belgium, New Zealand, Switzerland

Note: Holding periods listed in this table apply to publicly-traded shares (excluding stock options) held by shareholders without a significant stake or active role in the company's operations. Belgium and Switzerland only tax capital gains on shares held in a professional capacity (see Annex A). France's exemptions only apply to shares purchased before 2018. New Zealand exempts gains on shares unless acquired for the specific purpose of resale or if they are invested in foreign (excl. Australia) jurisdictions.
Source: Delegates' responses to the Questionnaire on Top Income and Wealth Taxation; OECD Secretariat desk research

3.4. Tax treatment of capital losses

Countries have different tax deductibility rules for capital losses. Most countries allow individuals to offset capital losses from all assets and allow excess losses to be carried forward to offset future capital gains, typically with limitations. Table 5 summarises the different loss carry forward periods in OECD countries. Losses can generally only be used to offset other taxable capital gains (i.e., losses are ring-fenced). Few countries allow individuals to deduct capital losses from other forms of capital income, such as dividends, and in rare instances, from labour income. Norway, for example, allows capital losses to offset ordinary income, and the United States allows taxpayers to offset capital losses against ordinary income up to USD 3 000 each year. Further, individuals who invest in small businesses or small business investment companies can deduct losses from the sale or exchange of their stock from their ordinary income, a rule aimed at encouraging investment in small business investment stock (Congressional Research Service, 2023[29]). Sweden allows for a tax credit of 30% of capital losses to be used to reduce taxes on wages, but only 70% of net equity losses can count towards the calculation of this tax credit.

Table 5. Loss carry forward periods for shares held by individuals in OECD countries

Loss carry forward period	Countries
No carry forward	Lithuania, Luxembourg, Sweden, Türkiye
Losses are not deductible	Switzerland
3 years	Japan
4 years	Spain
5 years	Czechia, Finland, Greece, Poland
10 years	France, Mexico
Indefinite	Australia, Canada, Germany, Ireland, Israel, Norway, United Kingdom, United States
NA	New Zealand

Note: Data was not available for Belgium, Chile, Costa Rica, Denmark, Estonia, Iceland, Italy, Korea, Latvia, Netherlands, Portugal, Slovak Republic, Slovenia. New Zealand does not levy capital gains tax on share disposal.

3.5. Tax treatment of unrealised capital gains at death

Approaches to capital gains taxation at death vary across countries. There are three different approaches to the taxation of unrealised capital gains at death:[14]

- Countries may tax unrealised capital gains, treating death as a realisation event.
- Unrealised capital gains may be passed to heirs on a carry-over basis. When an heir sells the asset, capital gains tax is levied on the difference between the sale proceeds and the asset's original value when the testator acquired the asset.
- Unrealised capital gains may be exempt upon death and transferred to the heir with a step-up in basis. When the heir sells the asset, only the asset's appreciation since the transfer is subject to capital gains taxation, effectively forgoing tax revenue from unrealised capital gains at death.

Among countries levying inheritance or estate taxes, the step-up in basis is the most common approach, applied by 12 countries. Unrealised capital gains are carried over in eight countries, while only two – Denmark and Hungary – treat death as a realisation event for capital gains. Of countries that do not impose inheritance or estate taxes, most countries pass unrealised capital gains to heirs on a carry-over basis (OECD, 2021[3]).

3.6. Exit taxes

Some OECD countries levy exit taxes. Exit taxes ensure that the capital gains that accrued to individuals while residing in a country are taxed when they change tax residence, by deeming a disposal of assets at market value immediately before departure.[15] In this respect, exit taxes are a departure from realisation-based taxation if they are levied before an asset is sold (see section 6.2). Among OECD countries,

[14] A full discussion of the tax treatment of unrealised capital gains at death is available at OECD (2021[3])

[15] An alternative rationale is that exit taxes perform an anti-abuse function, ensuring that individuals do not migrate solely for the purposes of realising capital gains and then returning to the original jurisdiction. Provisions that cancel the exit tax after a certain number of years abroad are consistent with this rationale for exit taxation.

fourteen[16] levy exit taxes on unrealised capital gains for taxpayers who change tax residence[17], while the United States levies an exit tax on individuals relinquishing their citizenship since it applies citizenship-based taxation.[18]

The rules governing exit taxation vary between countries. Exit taxes are generally levied at the same rate as regular capital gains taxes and the tax base is usually the difference between the deemed market value at the time of the cessation of tax residency and the purchase value. However, some countries may allow rebasing (only taxing the gain between when the taxpayer became a tax resident in a country and when they leave) (e.g. Canada and, in certain cases, Norway). Countries may also reverse the exit tax if individuals return to the country (e.g., Canada, Korea, Japan), effectively reinstating the situation prior to an individual's departure. Some countries make it possible for taxpayers to defer payment until assets are sold under certain conditions, while others (e.g., Australia, Canada, Denmark, and Israel) allow individuals to defer exit tax payments without an interest charge until the gains are realised.

Some countries have provisions that narrow the application of exit taxes, which include:

- the exclusion of certain assets from the tax base. While most countries levy exit taxes on financial assets such as shares, derivatives, and shareholder rights (e.g., Austria, France, Germany, Japan, Norway, Sweden, and Spain), fewer also levy them on non-financial assets such as jewellery and paintings (e.g., Canada) or real property (e.g., United States).
- only levying exit taxes after a minimum number of residence years. For example, the exit tax is triggered for people who have been tax residents for six years of the last ten years in France, seven of the last 12 years in Germany and ten of the last 15 years in Spain.
- exempting a portion of the capital gain. Norway taxes capital gains if they exceed NOK 500 000. France only taxes shareholders rights, securities, or equity interests above EUR 800 000 or if they represent at least 50% of a company's profits. The United States levies an exit tax on gains over an exclusion amount, for individuals whose personal net wealth exceeds USD 2 million or if their average income in the preceding five years exceeded a certain threshold.
- the waiver of the exit tax in certain circumstances. In France, the exit tax is reversed or waived (if payment had been deferred) if assets are held until death or for a certain number of years after the change of tax residence. In 2019, the relevant period was reduced from 15 years to 5 years if the value of the shares falling under the exit tax exceeds EUR 2 570 000, and to 2 years if the value is below that threshold.

[16] These countries are Australia, Austria, Canada, Denmark, France, Germany, Israel, Japan, Korea, Norway, Poland, Spain, Sweden, and the United States (based on WP2 delegates' responses to an OECD questionnaire on top income and wealth taxation, as well as Secretariat desk research).

[17] In Austria, the exit tax also applies to individual whose duty to pay tax to Austria has been restricted.

[18] The United States taxes citizens on their worldwide income irrespective of tax residence. There is an exclusion on foreign earned income (USD 126 500 in 2024 and indexed for inflation), as well as an exclusion or tax credit for housing.

4 Rationales for favourable tax treatment of capital gains

Different rationales are often cited to justify the favourable taxation of capital gains. The main rationales are to support economic growth through saving, investment, and entrepreneurship, to mitigate the lock-in effect, to address the double taxation of business income, and to avoid the taxation of inflationary gains. Favourable capital gains tax treatment may also be provided to address the lumpiness of capital gains or to achieve other policy goals, such as promoting homeownership. This section explores these rationales and the evidence that supports or challenges them.

4.1. Saving, investment, and entrepreneurship

Many countries justify favourable tax treatment for capital gains as a way to boost long-term economic growth through greater domestic savings, investment, and entrepreneurship. According to this argument, increasing the after-tax rate of return increases incentives to save, boosting domestic investment and supporting entrepreneurship. This is argued to be particularly the case when a tax is levied on the normal rate of return (or the return that compensates individuals for delaying consumption).[19] However, as will be discussed, there is limited academic literature providing support for the view that taxing capital gains will reduce savings, investment and entrepreneurship.

Theoretically, whether capital gains tax relief increases aggregate saving is ambiguous. Capital gains tax relief increases the after-tax return on investment, but whether this leads to higher aggregate savings hinges on which of two effects dominates: the income effect sees individuals saving *less* to maintain the same level of consumption in the future since a higher return increases future income; the substitution effect sees individuals saving *more* due to higher returns as the opportunity cost of consuming today increases. It has also been argued that tax relief can contribute to government dissaving if it increases national debt. The relief can therefore result in lower national saving if it is not offset by a rise in private savings (Congressional Budget Office, 1990[30]).

Empirical studies similarly point to mixed evidence about the link between taxation and savings decisions. There is limited evidence on the response of aggregate savings to capital gains taxation specifically, but related empirical studies are informative. A related parameter, the elasticity of intertemporal substitution (EIS), measures how individuals change their spending and saving patterns in response to changes in expected real returns. The academic literature examines the EIS in the context of interest rate changes net of tax. Most studies find positive elasticities, but the estimated magnitude varies significantly.[20] Some find low estimates, suggesting little responsiveness of domestic savings to changes

[19] See, for example, the discussion in Adam et. al. (2024[52]).

[20] Empirical findings can vary significantly based on different econometric methods, data used, or countries studied (see the discussions in Thimme (2017[126]) and Havránek et al., (2013[31])). A meta-analysis by Havránek et al.,

in expected net returns. However, other evidence suggests that certain categories of individuals, including those with higher incomes, greater participation in asset markets, and lower liquidity constraints exhibit greater sensitivity to tax rates (Havránek et al., 2013[31]). Research on tax-preferred retirement savings accounts, for which there is also significant research, reveals similarly mixed findings. Some studies find that tax incentives can lead to an increase in aggregate savings, while others find that individuals tend to reallocate their savings between savings vehicles in response to tax differentials.[21] Empirical studies from the wealth tax literature find minimal evidence of reduced aggregate savings in response to a wealth tax, and greater evidence of other margins of responses such as shifting portfolio composition in favour of tax-preferred assets (see the discussions in OECD (n.d.[2]) and Advani and Tarrant (2021[32])).

The extent to which favourable capital gains taxation increases aggregate domestic investment can similarly depend on different factors. For favourable tax treatment to promote domestic growth, any increase in savings should be largely invested domestically. Empirical studies have found correlations between domestic saving and investment[22], but some have found that they can vary across countries or decrease over time (see, for example, Georgopoulos and Hejazi (2005[33]); Chen and Shen (2015[34]), Bayoumi, Sarno and Taylor (1999[35])). Capital gains tax relief is poorly targeted in countries where the correlation is weak, since it typically applies to both domestic and foreign investments, while much capital is likely to be invested abroad. In some countries, a significant share of investment also comes from institutional investors or foreign investors who are unaffected by domestic capital gains tax relief. In the United States, for example, much capital, including venture capital, is supplied by non-taxable entities such as pension funds, non-profits, and foreign investors who are not subject to capital gains tax (Grubert and Altshuler, 2016[36]) (Gravelle, 2022[24]).[23] Domestic capital gains tax policy may therefore contribute little additional investment to a domestic economy.

There is also little evidence supporting the view that tax relief for the sale of closely-held businesses encourages entrepreneurship. Theoretically, an owner-manager's expected after-tax return can affect their choice to create or grow a firm and how much time and effort to invest in an entrepreneurial venture. Indeed, many entrepreneurs create businesses with the expectation of future income streams, including capital gains. However, whether capital gains tax relief leads to new economic activity (rather than, for example, tax arbitrage behaviours) is an important question. The literature exploring this question finds little support for the claim that tax policy materially affects the rate of entrepreneurial entry or the growth rate of new firms, since, unless capital gains tax rates are particularly high, they do not feature as a first-order consideration for entrepreneurs, particularly those that establish firms with the expectation of high payoffs (albeit at a low probability) (Fleischer, 2016[37]), (Morse and Allen, 2016[38]). This view was supported by respondents to a consultation process in the United Kingdom which found entrepreneur's

(2013[31]) found a standard deviation of 1.4 for elasticity estimates reported by the studies published in the top five general interest journals.

[21] For a discussion, see OECD (2018[120]).

[22] The influential work of Feldstein and Horioka (1980[127]) initially found high long-run correlations between domestic saving and domestic investment for OECD countries, counter to economic theory that capital should flow to countries offering the highest risk-adjusted after-tax return (coined the "Feldstein-Harioka puzzle"). A large body of literature has since explored this puzzle, yielding varying conclusions (for a review, see Singh (2016[128])).

[23] For a breakdown of the different characteristics of venture capital investors, see "The Invisible Investors that Drive Venture Capital," ACV, 2021, https://acv-vc.medium.com/the-invisible-investors-that-drive-venture-capital-63e1d2d54ce6

relief to be mistargeted with regards to stimulating business investment and risk-taking (Office of Tax Simplification, 2020[39]).[24]

Other measures, including non-tax measures, are likely more effective at encouraging entrepreneurship. Modelling by Smith and Miller (2023[40]) suggests that removing preferential capital gains tax for business owners in the United Kingdom and introducing tax deductions against personal income for new equity investment raises small business investment and tax revenue. Indeed, more targeted measures can also encourage entrepreneurship and risk-taking more directly than broad tax relief for all gains. Other tax system features, such as business tax provisions, may also target investment more directly than capital gains taxes at the individual level. Accelerated depreciation, for example, directly reduces the cost of capital and frees up cash, which is particularly useful to financially constrained firms. Up-front support to entrepreneurial ventures, including both tax and non-tax support, is also argued to be more effective than relief that materialises when an asset is sold. Non-tax support can include measures like loan guarantees, grants for business creation, and support with administrative procedures (OECD/European Commission, 2021[41]).

There is more support for the view that capital gains taxation can decrease external financing for entrepreneurial ventures. Certain businesses such as start-ups rely on external financing from investors including angel investors or venture capitalists who invest in small entrepreneurial ventures with high growth potential. Empirical evidence shows that such investors can exhibit greater home bias (Cumming and Dai, 2010[42]; Harrison, Mason and Robson, 2010[43]; Mäkelä and Maula, 2008[44]), suggesting that investment incentives, if effective, are more likely to result in investment retained domestically. Further, some argue that the effective tax rate on capital gains affects the savings and portfolio decisions of these investors, and that capital gains tax relief better incentivises long-term innovation than initiatives like direct subsidies, which are not performance-related (Keuschnigg, 2004[45]). Though the academic literature is sparse, some empirical evidence supports the view that capital gains tax relief can support such external investment in young firms. A study of a reform that fully exempted the sale of qualified small business shares from federal capital gains tax in the United States found that the reform increased external investment in start-ups by about 12% (Edwards and Todtenhaupt, 2020[46]). Another found that an increase in capital gains taxes on venture capital firm partners decreases the quantity and quality of innovation in the start-ups they invest in, with elasticities of patents to tax rate changes of -0.45 to -0.75 (Dimitrova and Eswar, 2017[47]). However, as mentioned above, the importance of capital gains taxation can depend on the mix of different types of investors, since some, such as pension funds that provide a significant share of venture capital funding, may not be subject to capital gains tax. Angel investors, on the other hand, may be more sensitive, particularly if they tend to hold local, smaller and less diversified portfolios that limit the scope for them to deduct losses (Gentry, 2016[48]).

The deductibility of capital losses can mitigate the adverse effects of capital gains tax on risk-taking, implying less need for further relief to encourage investment and entrepreneurship. A traditional view of the impact of taxation on risk-taking posits that taxation discourages risk-taking by lowering the expected rate of return. In most countries, however, individuals can offset losses against other income, reducing the downside risk of capital investment and entrepreneurship. As discussed in section 3.4, countries can treat capital losses differently, and even partial loss offsetting insures individuals against some share of risk. Some academic work supports the view that loss offsetting may increase the incentive to take risks (Domar and Musgrave, 1944[49]); (Stiglitz, 1969[50]), increasing holdings in riskier assets and affecting portfolio choices.[25] Indeed, loss offsetting adds to the benefits individuals already derive from a

[24] This view was also supported in 2020 by the Chancellor of the Exchequer, who criticised capital gains tax relief for owner-managers as being expensive, ineffective, and unfair, incentivising one in ten claimants to set up a business (Sunak, 2020[145]).

[25] For losses and profits to be fully symmetric, full loss offsetting would be required. This involves allowing uncapped unused losses to be deducted against any form of income in any year. As outlined in section 3.4, no OECD country

higher expected return on riskier assets (Burman, 2009[51]). From the perspective of a risk-sharing arrangements between individuals and government, loss offsetting implies that governments share the risks of investment and entrepreneurship. Conversely, tax relief, as well as the deferral advantage, means that governments take a lesser share, or possibly none, of the upside to risk-taking. The relative tax treatment of profits and losses is therefore one policy tool for influencing risk-taking incentives. In this vein, Adam et. al. (2024[52]) argue for rate rises in the United Kingdom, accompanied by more generous deductions for losses including full carry-back, carry-forward, and offsetting against other income. However, such reforms would call for measures to prevent the use of artificial losses for tax avoidance.

Capital gains tax relief appears to have little impact on overall economic growth. Proponents of favourable tax treatment of capital gains argue that, if savings and investment increase, the rate of capital accumulation and therefore economic output will increase. However, as discussed, the academic literature does not strongly support these views. Further, empirical studies examining the impact of the effective tax rate on capital gains on economic growth have found no firm causal link (Congressional Budget Office, 1990[30]); (Fazzari and Herzon, 1995[53]); (Hungerford, 2012[54]). Tax relief may also come at the cost of other relief or support measures that could be more effective at encouraging economic growth.

4.2. The lock-in effect

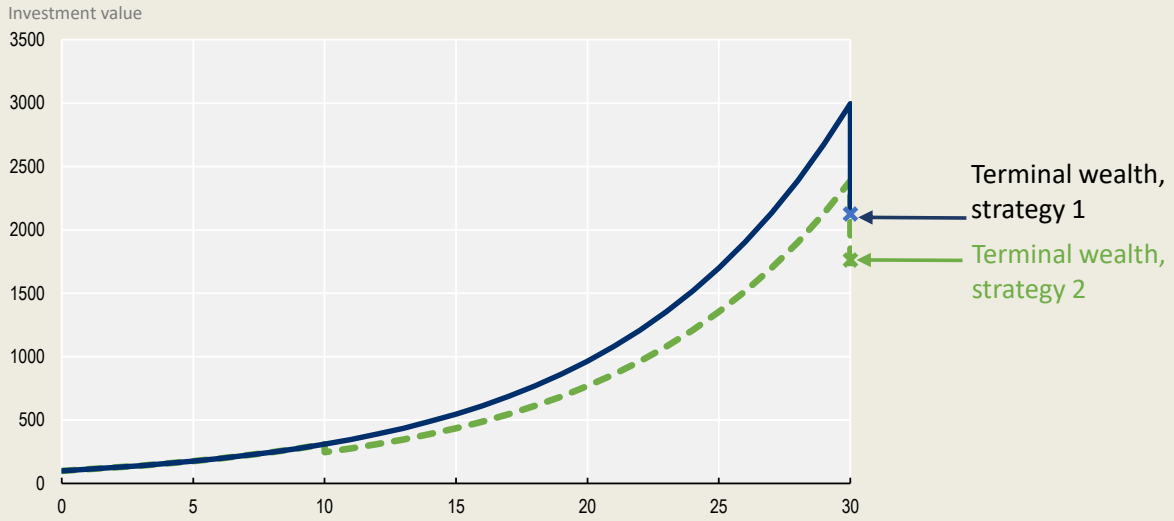
Another rationale for the favourable tax treatment of capital gains is to mitigate the lock-in effect. The lock-in effect occurs when individuals hold assets instead of selling them to delay paying taxes. It stems from the realisation basis of capital gains tax, which makes it possible to defer the payment of tax on accrued gains. Deferral provides a financial advantage to individuals that is sometimes viewed as implicit interest-free borrowing from the government (Box 2). Other features of tax systems can also add to the lock-in effect. In countries with progressive taxation of gains, individuals may delay the realisation of gains or losses to years when it is fiscally beneficial (e.g., when their income is lower). The step-up in basis of taxation, which resets the cost basis of unrealised gains when an individual dies (section 3.5), significantly adds to lock-in effects in countries where it applies.

allows for full capital loss offsetting. This is partially driven by concerns about the use of artificial losses for tax evasion and avoidance.

Box 2. The deferral advantage of realisation-based taxation

A key driver of the lock-in effect is the deferral advantage of realisation-based taxation. The advantage can be illustrated by considering two investment strategies over a time period t = 30, as shown in the figure below. Both strategies start with an investment of 100 units in an asset yielding a safe return at rate *i*. Under the first strategy, the invested capital of 100 units is sold at time t = 30, when capital gains tax is paid. Under the second strategy, capital gains are realised at t = 10, capital gains tax is paid, and the net proceeds are reinvested in a safe asset with the same rate of return *i* until t = 30 when the asset is sold and capital gains tax is again paid.

Figure 5. Value of two investment strategies over 30 years



The example shows that although the same amount of money is invested under two strategies with the same level of risk and the same return, strategy 2 yields a lower terminal wealth than strategy 1. Under strategy 2, the individual has foregone the time value of money they would have derived under strategy 1. The longer an asset is held, the greater the deferral advantage. Tax deferral can be seen to be an implicit interest-free loan from the government on accrued taxes, and that implicit loan grows while the invested amount accumulates with interest. The result would even hold for some rates of return that are lower under strategy 1 than strategy 2, as a lower interest rate may not fully offset the deferral advantage.

The lock-in effect has efficiency costs from the misallocation of capital. Investors may hold assets that have appreciated in value even if another investment could provide a superior risk-adjusted return, to avoid capital gains taxes falling due. On the other hand, an investor may bring forward the sale of a depreciated asset to benefit from loss deductions. This creates an economic distortion because investors do not hold their optimal portfolio of assets – rather, they are incentivised to sell assets generating losses and hold onto assets generating gains for tax purposes. If the lock-in effect means businesses remain privately held when they would otherwise be publicly traded, firms may miss out on growth opportunities, contributing to greater economic distortion (Gentry, 2016[48]). Capital gains taxes are also argued to lock owner-managers into their businesses, potentially inhibiting the transfer of ownership to those who can best manage them (Cavalcanti and Erosa, 2007[55]). Individuals being locked into housing can also reduce residential and labour mobility, as well as housing affordability.

Empirical studies support the view that capital gains tax relief can reduce the lock-in effect, though estimates of realisation elasticities vary. Empirical studies that estimate the responsiveness of capital gains realisations to changes in taxation generally find negative realisation elasticities. That is, individuals defer realisations as gains are taxed more heavily. Realisation elasticities depend on features such as the tax rate, whether capital gains are subject to flat or progressive taxes, and tax treatment at death. As such, estimates of realisation elasticities vary across tax systems, although much variation is also due to different estimation methods (Box 3). A study from Sweden found that a 10% increase in the capital gains tax rate reduces the number of capital gain realisations by about 8.7% and the magnitude of capital gains realisations by 1.9% (Daunfeldt, Praski-Ståhlgren and Rudholm, 2009[56]).[26] A study from Germany found that a one-standard-deviation rise in the marginal tax rate increased (reduced) the probability of realising losses (gains), as opposed to not realising taxable short-term gains by 5.34% (10.55%) in 2004 (Jacob, 2013[57]). A study from Australia estimated realisation elasticities of -0.59 at a 33.9% rate and -0.64 at a 36.75% rate (Minas, Lim and Evans, 2018[58]). Significantly more of the academic literature analyses the United States. While some studies have reported higher elasticities for the United States, most typically find short-run or transitory elasticities between -1 and -2 and long run elasticities of -0.5 to -0.8. Certain earlier studies that found higher elasticities supported the view that rate cuts would lead to revenue gains. However, studies based on improved data and estimation methods suggest lower elasticities, implying an opposite conclusion, namely that rate cuts would reduce revenue (Congressional Research Service, 2021[59]).

[26] Notably, this study considered capital gains under the dual Swedish income tax system, which taxes capital gains separately at a flat rate, so the marginal tax rate does not depend on the size of the capital gain or any other income.

Box 3. Realisation elasticity estimates and the revenue-maximising tax rate

Different types of elasticity estimates can measure realisation responses to capital gains taxes:

- A short-run elasticity measures how capital gains realisations react in the short term following a permanent change to taxation.
- A permanent elasticity reflects the longer-term response of capital gains realisations, usually after a year or two, to a permanent change in taxation.
- A transitory elasticity examines the reaction to a temporary tax change. For instance, it could reflect individuals timing the realisation of gains to coincide with low tax years or accelerating realisations in response to a tax change that is announced in advance (Congressional Research Service, 2021[59]).

Short-run and transitory elasticities tend to be higher than permanent elasticities, since the long-run effect of tax changes is more muted. Time-series studies and panel studies make it possible to separately estimate transitory and permanent effects if the data contain a sufficient number of years. Those studies have tended to find permanent elasticities that are significantly lower than short-run or transitory elasticities.

Realisation elasticities can affect estimates of the revenue-maximising capital gains tax rate, or the rate that generates the highest amount of revenue under realisation-based taxation. A revenue loss results from increasing tax if the absolute value of realisation elasticities is larger than one, since a decrease in realisations offsets the positive revenue impacts of raising rates. Conversely, tax cuts would be more than compensated by greater realisations, increasing revenue overall. If the absolute value of the elasticity is less than one, a tax increase raises revenue (a 1% increase leads to a decrease in realisations of less than 1%) (Congressional Research Service, 2021[59]). Conflicting estimates of realisation elasticities make it difficult to fully resolve debates about revenue-maximising capital gains tax rates, but estimates of realisation elasticities of less than one in some countries suggest there may be some room to raise more revenue through higher rates.

The extent of the lock-in effect depends on the composition of asset owners, and may be declining in some countries. In the United States, for example, gains are argued to increasingly accrue to entities that are outside the direct control of individual taxpayers and are therefore less easily timed, such as mutual fund distributions (Sarin et al., 2021[60]; Dowd, McClelland and Muthitacharoen, 2015[61]). Furthermore, foreign investors, retirement accounts, and other tax-exempt entities increasingly dominate stock ownership in the United States (Rosenthal and Mucciolo, 2024[62]). The decrease in ownership of assets among taxable accounts decreases the importance of the lock-in effect. Among asset owners who are taxable in a country, not all are likely to experience lock-ins either. Individuals who own a small number of assets may experience greater lock-in effects than those with diversified portfolios who can use losses on some assets to offset gains from others. Individuals who can access options or other derivatives to hedge against returns on locked-in assets are similarly less likely to experience lock-in (OECD, 2006[63]). The relative share of different types of investors can therefore affect whether capital gains tax relief to counter lock-in effects is needed and whether it would be effective.

Other policy responses may be more effective at countering the lock-in effect than capital gains tax relief. The realisation basis of taxation creates a deferral advantage that contributes significantly to the lock-in effect. Alternatives to the realisation basis of taxation, such as taxing gains as they accrue, may be more effective at countering the lock-in effect than maintaining the realisation basis and providing broad-based tax relief. However, these alternative approaches come with their own challenges (see section 6). Other provisions that contribute significantly to the lock-in effect could also be removed or scaled back. In

particular, countries that allow assets to be bequeathed without beneficiaries incurring a tax liability could reform the taxation of inherited assets.[27] Although empirical research on the issue is limited, evidence suggests a causal link between capital gains taxation and unrealised gains at death. One study from the United States finds that the estate tax, which effectively taxes unrealised gains at death, reduces lock-in incentives – a 1% increase in the tax rate increases realisations before death by 0.36% (Auten and Joulfaian, 2001[64]).[28] Other research also finds that the elasticity of realised capital gains would be reduced significantly if the step-up in basis at death were eliminated (Sarin, Summers and Zidar, 2021[65]), although estimates of the change in elasticity vary.[29]

The lock-in effect may also present some advantages. Despite the efficiency implications of lock-in effects, some countries see value in rewarding patient capital to promote long-term investment and foster innovation. Some make favourable tax treatment contingent on holding periods to achieve this type of lock-in. Indeed, the empirical literature shows that individuals are responsive to such incentives. In line with expectations, individuals tend to defer the realisation of their capital gains to benefit from lower taxation in the future, showing that policy makers can encourage certain forms of lock-in through policy design (He et al., 2022[66]). Indeed, allowing a degree of lock-in for investments may further other policy goals such as promoting long-term investment and innovation to counter recent trends of declining average holding periods (Della Croce, Stewart and Yermo, 2011[67]).

4.3. Double taxation

Another argument in favour of capital gains tax relief is that taxing gains on sales of shares amounts to the double taxation of corporate profits. Most OECD countries apply two levels of taxation on corporate income – CIT at the company level and PIT at the asset owner level (the classical system). This double taxation of corporate income can create inefficiencies that reduce investment from optimal levels where firms need to achieve a higher pre-tax return for investors compared with other investments. Many countries address the problem of double taxation by taxing capital gains more lightly than other income sources, although favourable tax treatment also often applies to gains from asset classes that are not subject to double taxation (e.g., real property).

The extent to which the taxation of capital gains on the sale of shares results in economic double taxation may vary. Some businesses may pay low effective CIT rates on their profits for several reasons, including due to tax incentives available for businesses or because the business shifts profits to a jurisdiction with low CIT. This would reduce any double taxation resulting from the non-integration of CIT and PIT systems relative to other forms of non-capital income, while broad relief at the personal level may not accurately reflect taxation at the firm level. Furthermore, the incidence of CIT does not always fall on shareholders through lower profits. The academic literature reveals mixed findings on how incidence is shared among economic agents, but there is broad agreement that it is borne to some extent by employees as well as shareholders (see the discussion in Hourani et al. (2023[5])). To the extent that this is the case, there is a weaker case for shareholder relief from capital gains tax (Boadway, 2021[68]). Furthermore, gains

[27] See section 3.5. For a summary of countries' approaches to inheritance taxation, see also OECD (2021[3]).

[28] The large scale of unrealised gains at death also suggests that capital gains tax exemptions may well be contributing to a lock-in effect. One study estimates the share of unrealised capital gains in the United States increases with the total value of the estate from roughly 13% for estates smaller than USD 2 million to more than 55% for estates above USD 100 million (Avery, Grodzicki and Moore, 2013[118]).

[29] For instance, for the United States, the Penn Wharton Budget Model applies a reduction in the elasticity from -0.66 to -0.53 (Ricco, 2019[137]) while the Tax Policy Center assumes a reduction from -0.7 to -0.4 (Mermin et al., 2020[140]).

on corporate stock may not always be the result of retained earnings which would usually have been subject to CIT (Box 1).

Whether double taxation at the firm and personal levels discourages business investment can depend on different factors, including the source of a firm's financing. A related concern regarding double taxation is that it can discourage investments by firms. A firm that finances business investment through new equity issues may be affected by double taxation if potential investors require a higher minimum rate of return to make an investment (although, as discussed, the marginal investor may not be subject to double taxation (e.g., some institutional investors)). However, firms that finance their investment through debt may be less affected by double taxation on interest payments to lenders since they can deduct interest payments from corporate tax. Firms operating at arm's length from their shareholders that finance investment through retained earnings may also be largely unaffected by double taxation as business investment decisions largely lie with the firm rather than shareholders. The impact of double taxation of corporate income on business investment may therefore depend on how firms finance their investments. Empirical evidence on firms' source of financing is mixed, although some recent empirical research seems to support the view that firms finance investment through retained earnings, or a combination of retained earnings and new equity issues.[30]

A dividend imputation system can alleviate the double taxation of corporate profits at the firm and individual levels, thereby reducing the need for capital gains tax relief. Countries with such systems generally attach to dividends a credit that represents the corporate tax paid on the underlying profits.[31] These credits reduce personal income tax liabilities to ensure the total taxation of dividend income reflects personal taxes. The credits increase the present value of expected future income streams from an asset, which can translate into higher asset prices, boosting capital gains and reducing the need for additional capital gains tax relief to address double taxation (Burman, 2009[51]).

4.4. The taxation of inflationary gains

If the capital gains tax base is not adjusted for inflation, tax may be levied on gains that exceed economic gains. A key argument for favourable capital gains taxation is, therefore, to avoid taxing inflationary gains or even economic losses. When the value of an asset increases, part of the capital gain could reflect inflation rather than a change in the real value of an asset. Failing to adjust capital gains for inflation can also lead to inequities between individuals that have the same real capital gains but different nominal gains (Feldstein and Slemrod, 1978[69]). Furthermore, it is argued that the taxation of nominal rather than real gains means higher inflation leads to higher capital taxation and increases lock-in effects (Beer, Griffiths and Klemm, 2023[70]). The inflation share of total capital gains varies but is of greater

[30] Different views exist regarding the main source of firm financing. One view is that firms are cash-constrained and require new equity to fund investment (the "traditional view"). An alternative view is that firms fund new investment through retained earnings (the "new view"). For a discussion of the literature, see Sobeck, Breunig and Evans (2022[124]).

[31] Some countries provide imputation credits to compensate shareholders for the tax paid at the company level when profits are distributed as dividends, and imputation credits offset the effect of capital gains taxation indirectly. For a summary of country approaches, see Hourani et. al, (2023[5]). Companies that retain earnings also retain unused imputation credits which shelter future dividend payments from tax, and these credits should be capitalised into the value of the company, increasing the capital gain shareholders receive on sales and partially offsetting double taxation (Burman, 2009[51]).

concern in high inflation years.[32] Over time, however, the share of gains that reflects inflation declines when nominal returns exceed the inflation rate, since returns compound more quickly than price inflation, and in some cases can represent a relatively minor share of the overall gain.[33] In addition, when gains are taxed on a realisation basis, as is generally the case, the benefit of capital gains tax deferral already, at least partially, counteracts the effect of inflation.[34] It is also relevant that tax relief for inflation provided for capital gains often does not apply to other capital income sources which are also sensitive to inflation, such as interest or rental income (Waggoner, 1977[71]).

Few countries explicitly adjust capital gains tax for inflation. As outlined in section 3, a minority of countries including Chile, Israel, and Mexico allow for an explicit inflation adjustment. Others, such as the United Kingdom and Australia, abandoned previous provisions that indexed gains for inflation. Countries more commonly provide broad tax relief that is intended to compensate individuals for inflationary gains, among other objectives. However, under such approaches, tax relief tends to overcompensate individuals, especially after low inflation years (Cunningham and Schenk, 1992[72]).

4.5. Lumpiness of gains

Large capital gains may push taxpayers into higher tax brackets under progressive tax rate schedules. Taxpayers are generally liable to pay taxes in a realisation year for gains that have accrued over several years. Under progressive tax rate schedules, taxpayers may be subject to higher marginal tax rates when capital gains are realised than when they accrue. This argument has been used to justify preferential tax treatment. However, capital gain lumpiness can be addressed through policy design (see section 6.1.3). Some countries already have arrangements such as the spreading of capital gains that mitigate the lumpiness of gains. Alternative options also include allowing for 'backwards averaging', such that an individual's marginal tax rate depends on their historical marginal rate over previous years (Advani and Summers, 2022[73]). Other counterarguments to the need for tax relief posit that capital gains are often realised by taxpayers already in high tax brackets (Cunningham and Schenk, 1992[72]) (see also section 2). Furthermore, other sources of income, such as labour income, can in some cases be similarly lumpy (e.g. if individuals take career breaks or receive large bonuses), making tax relief for capital gains at odds with the tax treatment of other income sources and encouraging income shifting. Capital gains tax relief is also less necessary for some assets, such as shares, for which gains can be realised gradually to mitigate this effect.

4.6. Other policy goals

Some countries provide favourable capital gains tax treatment to certain assets to further other policy goals. Governments often provide generous tax concessions to capital gains on housing, especially owner-occupied housing (see section 3), as a form of support for homeownership.[35] Tax-favoured treatment of capital gains on housing may also be justified as a way to mitigate the lock-in effect. Some countries also provide capital gains tax relief for the transfer of businesses as a means of supporting the

[32] For instance, the historical inflation share of an indexed average stock on the S&P 500 sold in 2013 can range from 9.1% to 100% of total capital gains depending on the year the stock was bought. A detailed example is available in Aldridge and Pomerleau (2013[121]).

[33] For a numerical example, see Gravelle (2018[94])

[34] Under certain circumstances, the values of the two are close and may directly offset one another. An example is available in Gravelle (2022[24])

[35] For a discussion, see OECD (2022[4])

retirement of business owners, who tend to have lower pension savings and entitlements. Finally, some countries may provide certain forms of relief to ease the administrative burden of capital gains taxation. For example, a small, fixed exemption amount can serve as an administrative de minimis. Taxation of gains under separate flat rate schedules (which are often lower than top tax rates under progressive schedules) can also be administratively simpler than aggregating gains with other income sources, enabling tax to be withheld directly rather than through the tax return process.

Capital gains tax relief is often not the most effective approach to achieving some of these policy goals. In many cases, policy goals such as these could be more effectively achieved through other instruments. For instance, favourable capital gains tax treatment can have limited effectiveness in promoting homeownership, since the main impediments to homeownership generally arise before purchase (e.g., down-payment and income constraints), while the benefits of tax exemptions materialise upon sale (OECD, 2022[4]). Many OECD countries also already provide generous financial incentives for retirement savings through private pension arrangements that are often better targeted than capital gains tax relief. Further, advances in tax administration (e.g. through digitalisation) may reduce the need for capital gains tax relief that is intended to reduce the administrative burden of having to aggregate capital gains with other income. Indeed, several countries already tax capital gains comprehensively with other sources of income.

5 Challenges arising from current capital gains tax design

Favourable capital gains tax treatment raises different policy challenges. It can generate economic distortions and reduce horizontal equity. The favourable tax treatment of capital gains, and in particular, the realisation basis of taxation, can also incentivise tax minimisation behaviours such as income shifting and capital gains deferral. It can also decrease vertical equity in light of the disproportionate share of capital gains held by high-income and high-wealth individuals, while being a costly form of relief. This section discusses these challenges.

5.1. Economic distortions and loss of horizontal equity

The differential tax treatment of capital gains can generate economic distortions. In many countries, capital income is taxed more favourably than labour income, even after accounting for firm-level taxes (Hourani et al., 2023[5]), which can influence individuals' behaviours. This may encourage shifts from labour to capital income (see section 5.2). The favourable tax treatment of capital gains may also encourage individuals to favour growth assets over income-generating assets. Companies may also boost share value through buybacks, rather than distribute dividends. The exemption for capital gains on housing similarly increases its attractiveness for investment, which may divert capital away from other assets and contribute to overconsumption of housing.[36] Policy makers may have legitimate reasons for departing from the principle of tax neutrality, but doing so should be held to a high level of scrutiny and justified by the achievement of clear policy goals. As discussed previously, the evidence suggests that arguments justifying the favourable tax treatment of capital gains may not meet this standard.

The favourable tax treatment of capital gains reduces horizontal equity. Individuals with the same level of income may face different tax liabilities on income from gains compared with other income sources, reducing horizontal equity. Capital gains may also at least partly reflect returns to labour, for instance when capital gains on housing result largely from DIY renovations (Slemrod and Chen, 2023[74]) or when closely-held businesses are sold (Zawisza et al., 2024[6]; Advani et al., 2024[75]). Gains of entrepreneurs such as technology company founders often also largely represent a return on work, ideas, and leadership, rather than on generally small personal financial investments (Fleischer, 2019[76]). In the United States, for instance, Smith et.al. (2019[77]) find that most private business profits are the product of the owner's labour effort. In such cases, applying different taxation to different sources of income that are close in substance exacerbates horizontal inequities. A similar argument may be made for the taxation of carried interest. Carried interest can be seen as compensating fund managers for services rendered (e.g., coordinating

[36] See the discussion in OECD (2022[4])

partnerships, finding and structuring investments, advising portfolio companies). This suggests that carried interest is, at least partially, compensation for labour efforts that is taxed as a capital gain.[37]

5.2. Tax minimisation opportunities

The favourable taxation of capital gains incentivises income shifting behaviours. Owner-managers of businesses can choose whether to distribute profits via wages or dividends, or to retain them within a firm. Where capital gains are taxed at lower rates than wages and dividends, this may encourage the conversion of income into capital gains through the retention of corporate profits. The realisation basis of taxation also provides strong incentives to retain rather than distribute corporate profits. There is evidence of such income shifting behaviours. For instance, Smith, Pope and Miller (2019[78]) find a large degree of intertemporal income shifting via retained profits by owner-managed companies in the United Kingdom. They also show that retained income is not associated with more investment in business capital. Alstadsæter et al. (2016[79]) also identify substantial intertemporal income shifting via retained earnings among Norwegian businesses, while Le Maire and Schjerning (2013[80]) find notable intertemporal income shifting among Danish self-employed individuals and show that profit retention in the company is the key margin of response. These behaviours ultimately reduce the efficiency and equity of tax systems (for further discussion, see Zawisza et al. (2024[6])).

Some tax minimisation strategies enabled by the realisation basis of taxation involve strategically timing or deferring capital gains realisations. If gains are taxed progressively, individuals may sell assets in low-income years to benefit from lower tax rates. Taxpayers may also strategically time the realisation of losses to minimise taxable income (e.g., to offset large gains), including after loss harvesting.[38] However, rules discouraging "superficial losses" (losses designed to engineer immediate tax deductions without materially changing portfolio allocation) and ring-fencing rules can restrict taxpayers' abilities to benefit from the use of losses. Another tax minimisation approach involves not realising gains at all, and instead using assets as collateral against loans to finance consumption.[39] In countries that apply a step-up in basis at death, taxpayers may also defer realising capital gains during their lifetimes by holding appreciated assets until they die to avoid taxation.[40] One study from the United States that analysed the impact of capital gains taxation on leverage found evidence that individuals tend to borrow against appreciated assets to avoid paying taxes on assets held until death – it finds that a ten percentage point reduction in the tax rate in effect in the year prior to death leads to a reduction of one percentage point in the debt ratio observed on the estate tax returns (Joulfaian, 2014[81]).

The realisation basis of taxation makes other tax minimisation strategies possible. For instance, in some countries, individuals may use trust arrangements to direct income to a passive private company created to be the beneficiary of a trust (also known as a "bucket company"). Doing so defers the payment of tax, while the bucket company retains and invests the income. Countries that use the participation

[37] Different views exist on the taxation of carried interest, with arguments supporting the taxation of carried interest as ordinary income, as capital gains, or a mix of the two (see, for example, Cochran (2014[122]), Marron (2016[123]), Neidle (2023[141]))

[38] Loss harvesting refers to losses being realised and then replaced with the same or similar assets to the asset that was sold.

[39] Investors can also use capital gains-producing assets as collateral to purchase new assets that are then paid back with tax-deductible interest. The collateral-bearing asset appreciates, earning investors a profit while repaying a loan even if the pre-tax return on the newly acquired asset is equal to the loan's interest rate (Enda and Gale, 2020[119]).

[40] Such a tax avoidance strategy which consists of acquiring and holding assets, taking on debt to finance consumption, and dying with unrealised gains is frequently referred to as "Buy, Borrow, Die" (McCaffery, 2020[139]).

exemption method for corporate capital gains allow companies to exclude certain types of income from taxation to avoid double taxation at the subsidiary and parent company levels.[41] However, this also makes it possible for individuals with certain private investments (e.g., holding companies) to realise capital gains within companies while deferring tax at the personal level.

5.3. Loss of vertical equity

High-income and high-wealth individuals disproportionately benefit from the favourable tax treatment of capital gains. As discussed in section 2, both realised and unrealised capital gains are disproportionately concentrated among top income and wealth households. By extension, the highest-income and wealthiest households receive most of the benefit from favourable capital gains taxation. In the United States, nearly 80% of the tax expenditure for preferential capital gains rates accrue to the top 5% of income earners (Joint Committee on Taxation, 2023[82]). Similarly, in Australia, 75% of capital gains tax discounts accrue to individuals or trusts in the top 10% of the taxable income distribution (Treasury, 2023[83]). High-wealth individuals, whose assets appreciate year on year and who tend to earn higher returns on their assets than other households (Fagereng et al., 2020[84]), are also the main beneficiaries of the deferral advantage stemming from the realisation basis of taxation. Favourable capital gains taxation has also raised intergenerational equity concerns as wealth is disproportionately held by older households (Tapper and Fenna, 2019[85]), (Federal Reserve, 2024[86]).

High-income and high-wealth individuals are also more likely to engage in tax arbitrage and minimisation. The favourable tax treatment of capital gains is part of the reason that capital gains are highly concentrated at the top of the income and wealth distribution, suggesting tax arbitrage behaviours among these households, who are also more likely to own businesses through which tax arbitrage may occur (Zawisza et al., 2024[6]). High-income and high-wealth individuals also typically have greater access to sophisticated financial advice. Individuals at the top of the wealth distribution also more commonly use assets as collateral for loans to avoid realising capital gains.

5.4. Loss of potential revenue

Favourable capital gains tax treatment can be costly in terms of forgone revenue. Capital gains tax levied on individuals accounted for an average of 1.2% to 2.0% of countries' tax revenues between 2019 and 2021 for countries with available data.[42] This relatively low share is at least partly driven by its favourable tax treatment, including taxation upon realisation. The cost of capital gains tax relief is high in many OECD countries and likely rising with asset price trends and tax minimisation strategies. In Canada, major individual capital gains tax exemptions[43] are projected to cost CAD 18.5 billion in 2023, in Australia, the main residence exemption and capital gains tax discount are together projected to cost AUD 66.5 billion in 2023-24, and in the United Kingdom, relief for primary residences cost GBP 37.1 billion in 2021-22 (Treasury, 2024[87]); (HMRC, 2024[88]); (Government of Canada, 2024[89]).

[41] The participation exemption method exempts companies from tax on dividends and share gains. The purpose is to avoid profits being taxed several times when capital moves between companies, weakening capital mobility.

[42] OECD Data Explorer: *Comparative tables of Revenue Statistics in OECD member countries*. It should be noted, however, that data is only available for 10 OECD countries owing to difficulties in disaggregating the sources of capital income.

[43] The total of the partial inclusion of capital gains, non-taxation of capital gains on principal residences, and the lifetime capital gains exemption.

Research from some OECD countries suggests that increasing the taxation of capital gains can raise revenue. As discussed in section 4.2, recent empirical studies estimating responses to capital gains tax changes find realisation elasticities with absolute values less than one in some countries. This suggests that increasing the effective tax rate on capital gains could increase revenues. For example, in the United States, the revenue maximising rate has commonly been estimated to be in the range of 28% to 30% as compared to the current top effective rate of 23.8% (McClelland, 2020[90]; Sarin et al., 2021[60]).[44] Agersnap & Zidar (2021[91]) argue that the revenue maximising rate could be as high as 38% to 47%, though some of the limitations of these estimates have been pointed out by McClelland (2020[90]). For the United Kingdom, Advani, Lonsdale and Summers (2024[92]) estimate that raising tax rates on capital gains to equalise them with income tax rates as part of a broader reform package could increase revenues from capital gains taxation by 88%.

[44] This ignores the effects of state capital gains tax rates that are typically around 5-6% and generally not deductible on Federal tax returns due to a USD 10,000 cap on deducting state and local taxes.

6 Alternative approaches to taxing capital gains

Interest in alternative approaches to taxing capital gains has grown in recent years. Challenges stemming from the taxation of capital gains have prompted interest in alternatives to the common approach of taxing gains upon realisation, while providing broad forms of tax relief such as lower rates or exemptions. This section considers targeted forms of relief that can replace broad-based tax relief for realised capital gains; and adjustments or alternatives to the realisation-basis of taxation that can reduce lock-in effects and tax avoidance opportunities. It provides an overview of the pros and cons of these approaches, which could be examined further and compared with other policy reforms in future work.

6.1. Alternatives to broad tax relief for realised capital gains

Targeted provisions may help address specific issues in relation to the taxation of gains and reduce the need for broad-based capital gains tax relief. For instance, inflation indexation directly compensates individuals for the taxation of inflationary gains and a rate of return allowance adjusts gains for the normal return on saving. The spreading of capital gains can smooth lumpy gains while rollover relief can reduce the lock-in effect of realisation-based taxation. This section discusses different forms of targeted relief as alternatives to broad-based relief, highlighting their advantages as well as the challenges involved.

6.1.1. Inflation indexation

Adjusting capital gains for inflation more directly compensates individuals for the taxation of nominal gains than broad forms of relief. The Haig-Simons definition of income implies that real, rather than nominal, gains should be taxed, since nominal changes in income accompanied by equal proportional changes in prices do not change one's ability to consume (Simons, 1938[93]). Compensating individuals for the inflationary component of gains is one rationale for tax relief (section 4.4). However, most countries provide broad relief in lieu of explicit adjustments, yielding imperfect compensation that does not accord with the variability of inflation. The imprecise approach may overcompensate individuals during periods of low inflation and undercompensate them when inflation is high, an issue which has become more relevant in recent years. Broad capital gains tax relief also contributes to differences in the effective taxation of different investments, since the inflationary share of gains can vary across asset types (e.g., dividend-paying vs growth shares) (Gravelle, 2018[94]). By contrast, explicit inflation adjustment compensates individuals for the inflationary component of gains more directly and accurately than broad tax provisions. Doing so requires calculating and applying an economically appropriate inflation rate to nominal gains.

Administrative costs have deterred some countries from implementing inflation indexation, although such concerns may be less problematic than before. Indexing capital gains for inflation would involve greater complexity and a higher compliance burden than broad forms of relief. Some countries previously adjusted capital gains for inflation but later abandoned the approach. However, many of the arguments against inflation indexation may be less relevant today. Some argue, for example, that the features that previously made the allowance difficult to administer and understand may now be overcome

through integrated software and improved capacity for processing tax information (Office of Tax Simplification, 2020[39]; Gravelle, 2018[94]; Advani, 2021[95]).

Adjusting capital gains for inflation should involve a consideration of the policy implications. Indexing capital gains and not other income such as interest could exacerbate tax arbitrage opportunities. Tax sheltering is often possible where individuals can borrow and deduct nominal interest while investing in capital gains that attract favourable tax treatment. Adding an indexation adjustment that does not apply to other forms of income could exacerbate outcomes such as these (Gravelle, 2018[94]), suggesting that inflation indexation should replace rather than add to existing tax relief. Replacing favourable tax rates on gains with an explicit inflation adjustment would also reduce effective tax rates on short-term more than long-term assets (Gravelle, 2018[94]), since the inflationary share of gains is relatively larger in the short term. This could counter any policy goals of providing beneficial tax treatment to assets held for longer periods (see section 4.2), although maintaining the realisation basis of taxation continues to provide individuals with a financial advantage from holding assets over the long term.

6.1.2. Rate of return allowance

A rate of return allowance adjusts gains for the normal return on saving. As discussed in section 4.1, individuals face a trade-off between consuming today or saving for the future. The rate of return allowance provides for a deduction for the 'normal' return on savings. Since only the excess return to capital (i.e., the economic rent from saving) is taxed, the approach is argued to reduce the disincentive to save. Saving and investment are costs associated with generating future income, so a deduction for the opportunity cost of capital is argued to reduce the disincentive to save and invest without creating significant opportunities for tax avoidance (Mirrlees et al., 2011[96]).[45]

[45] The Mirrlees review in the United Kingdom proposed a single tax rate schedule on income from all sources, with a rate of return allowance for all forms of capital income (Mirrlees et al., 2011[96]).

Box 4. Norway's shareholder model

Norway's shareholder model for taxing dividends and gains is an application of the rate of return allowance. Individuals can deduct an imputed risk-free rate of return upon the receipt of dividends or capital gains. The normal return to shares is therefore tax exempt and only the equity premium is subject to taxation at a flat capital income tax rate. The imputed risk-free rate of return is based on the interest rate on government bonds. The deduction, or rate of return allowance, is the product of two figures:

1. a shielding rate, which is described in regulations as determined by the Ministry of Finance. The rate is based on the average interest rate on treasury bills with a maturity of three months with an additional 0.5 percentage points followed by a downward adjustment for a 22% tax rate.
2. the stepped-up basis of the share at the start of the year, which is the sum of the original acquisition price of the share and all the rate of return allowances on the share not used in previous years.

The tax rate for ordinary income for individuals and companies in Norway has gradually fallen to 22% in recent years. To counter the decline in the overall taxation of share income (the cumulative taxation of at the company and shareholder level), an adjustment factor was introduced that amends the applicable tax rate. In 2024, the upward adjustment factor was 1.72 and will remain at this level in 2025.

Different arguments support a rate of return allowance. In addition to reducing the disincentive to save, a tax on excess returns is argued to generate positive tax revenues from the increased risky investment it stimulates, including any additional rents (Boadway and Spiritus, 2024[97]). A rate of return allowance can also help mitigate the deferral advantage of realisation-based taxation in some cases. Theoretically, the allowance can eliminate the lock-in effect by removing the advantage to asset owners from deferring capital gains tax. Under the Norwegian model, for example, the previous year's tax liability is effectively carried forward with interest (a numerical example is available at Annex B). In practice, however, research from Norway has found that the rate of return allowance does not eliminate the lock-in effect entirely (Box 5).

However, there are also arguments against applying a rate of return allowance. As previously discussed, the evidence linking tax design to savings and investment is not settled, questioning the need for a rate of return allowance to encourage lifetime savings. Indeed, evidence from Norway suggests that the rate of return allowance only reduces the return requirement for companies that are dependent on equity from domestic investors (e.g. companies that seek financing from undiversified shareholders or investors with local connections) (Sørensen, 2022[98]). Other analysis suggests that investors' return requirements are largely determined in the international capital market, and the rate of return allowance therefore does not affect Norwegian companies' capital costs[46] (Lindhe and Södersten, 2011[99]). Some research based on optimal tax theory also suggests that taxing both normal and excess returns can be welfare-improving and enhance progressivity (Boadway and Spiritus, 2024[97]).[47] Finally, a recent tax

[46] Lindhe and Södersten (2011[99]) argue that this is true even for small firms with limited access to international markets. The paper finds that the effect of the rate of return allowance on small firms depends on the covariance between returns on small and large companies. High covariances imply that the internationally determined rate of return requirements on large company shares may have a substantial impact on the rate of return requirement for small company shares.

[47] The results are also in line with findings from the optimal tax literature regarding the role of capital income taxation in mitigating distortions associated with labour income taxation (see, for example, Conesa, Kitao and Kreuger (2009[134]); Jacobs and Bovenberg (2010[135])).

review from Norway has found that the rules are complicated, leading to high ongoing administrative costs that add to the start-up costs of obtaining the historical data needed (Torvik et al., 2022[100]).

Box 5. The rate of return allowance and capital gains tax deferral

The rate of return allowance reduces the benefits of deferring capital gains realisations in many cases. However, an incentive remains for owners of closely-held businesses to postpone realisation so profits can be reinvested within the corporate sector, yielding a higher return than gains that are reinvested after personal income tax is paid. In Norway, for example, reinvested corporate profits do not benefit from the rate of return allowance whose basis is a function of the original share value. Therefore, whether a lock-in effect eventuates can hinge on whether the advantage of tax deferral exceeds the disadvantage of investing without the benefit of the rate of return allowance (Torvik et al., 2022[100]).

Related research from Norway has argued that whether the rate of return allowance removes the deferral advantage depends on investors' investment financing strategies and the individual marginal cost of finance. In the case of Norway, the rate of return allowance reflects the risk-free rate, and no deferral advantage exists if individuals finance investment by drawing on risk-free assets such as bank deposits. However, individuals who finance investments through loans whose interest rates exceed the normal rate of return may be better off deferring realisation as opposed to selling an asset, paying capital gains tax from borrowed funds, and reinvesting in a new equity. As such, a neutral rate of return allowance would vary by individual, and the research suggests that the interest rate on 10 year government bond may better reflect the average financing cost than the risk free market interest rate (Sørensen, 2022[101]; Torvik et al., 2022[100]). A further discussion and numerical examples are available at Sørensen (2022[101]) and Torvik et al. (2022[100]).

6.1.3. Spreading of capital gains

Some provisions allow individuals to "spread" capital gains, distributing the recognition of capital gains and their taxation over an extended period. Such provisions are often designed to mitigate the increase in an individual's tax liability due to large, one-time capital gains in systems that tax gains at progressive rates. Spreading capital gains smooths taxation such that it better aligns with a taxpayer's actual financial situation. This can make the taxation of capital gains more equitable and reduces distortions caused by the lock-in effect. However, some approaches can add to the administrative burden of capital gains taxation, and as discussed in section 4.5, there exist some arguments against providing tax relief for lumpiness of gains.

Various approaches can be used to spread capital gains. For example, taxpayers in the United States who sell assets under an "instalment sale" arrangement receive payment for the asset over multiple years rather than in the year of the sale, and revenue is recognised at the point of cash collection. This makes it possible for taxpayers to spread the gain from the sale of certain assets (such as real estate or business property) over several years. However, this is not possible for publicly traded securities. Canada has a provision known as the capital gains reserve, which allows taxpayers to report only a portion of the gain in a given tax year when disposing of certain assets, as long as individuals do not receive full payment for their asset at once. In some countries, the availability of lifetime exemption amounts (e.g. for capital gains on the sale of closely-held businesses in Australia and Canada) can also be one way to effectively smooth gains over time. The academic literature has proposed additional approaches to spreading capital gains, such as assuming gains have accrued over a fixed time period (rather than only in the realisation year) (Advani, 2021[95]).

6.1.4. Rollover relief

Some countries allow for rollover relief, a mechanism to defer capital gains tax. Rollover relief generally aims to minimise undesirable consequences of capital gains tax falling due in specific cases. For example, in Australia, this may include cases where there is no change in the underlying ownership of an asset (e.g., if shareholders exchange a class of shares for a different class in the same company) or certain involuntary asset disposals (e.g., as part of a marriage breakdown) (Board of Taxation, 2020[102]). Some countries provide other grounds for relief, such as not to discourage voluntary business restructures. The United Kingdom, for instance, provides for rollover relief upon the sale of business assets, if the owner uses all or part of the proceeds to buy new business assets. In addition, rollover reliefs can exempt capital gains from the sale of businesses if the proceeds are re-invested in similar assets within a certain period. In some countries, the rationale for this relief is linked to retirement, on the grounds that gains from businesses can be seen to be an alternative to a pension (Office of Tax Simplification, 2020[39]). Rollover relief can also apply to real estate taxation – for instance, Czechia, Spain, Sweden, and Lithuania offer roll-over reliefs if sale proceeds are reinvested in a similar property.

Rollover relief can address the lock-in effect of taxation but calls for careful consideration. The main rationale for rollover relief is to reduce the efficiency costs of the lock-in effect. In some countries, however, conditions for rollover relief have become complex as rules have evolved on a piecemeal basis, making eligibility and compliance hard to assess (Board of Taxation, 2020[103]). Furthermore, its impacts on the lock-in effect can vary. It may reduce lock-in incentives in certain cases, such as when rollover relief is contingent on sale proceeds being reinvested in the same asset category. However, it can deepen lock-ins across different asset categories and extend deferral opportunities, adding to the stock of unrealised capital gains that remain untaxed (OECD, 2006[63]).

6.2. Adjustments or alternatives to realisation-basis taxation

Some adjustments or alternatives to the realisation basis of taxation can reduce lock-in effects and tax minimisation. As discussed in the previous sections, the realisation basis of taxation allows taxpayers to strategically time and defer capital gains realisations, generating lock-in effects and reducing both progressivity and tax revenue. Different approaches can mitigate these issues while generally maintaining realisation-basis taxation. They include deeming the realisation of gains upon certain events or taxing gains from longer-held assets more heavily through retrospective taxation. Alternatively, capital gains can be taxed as they accrue, which eliminates lock-in effects and opportunities for tax minimisation through deferral. These different options have benefits and shortcomings, though the trade-offs for some are less significant than for others.

6.2.1. Deemed realisation of capital gains upon certain events

Deeming the realisation of capital gains upon certain events can reduce lock-in effects and ensure that capital gains do not escape taxation. Such events can include death, the change of tax residence, or the use of appreciated assets as collateral against loans. Taxing gains upon these events limits the scope for tax deferral (and therefore the lock-in effect) or tax-induced migration. This would also enhance progressivity given the concentration of unrealised capital gains among higher-wealth individuals, some of which can otherwise remain untaxed for extended periods, or indefinitely. These measures would also raise additional revenue directly by reducing tax leakage and indirectly by enhancing the effectiveness of tax rate increases. These measures may also be less administratively burdensome and more politically feasible than accrual-based taxation (see section 6.2.3). Overall, they may represent significant enhancements to the realisation basis of taxation that bolster the capital gains tax base by preventing certain gains from escaping taxation.

Deemed realisation of unrealised capital gains upon death

Deeming the realisation of unrealised capital gains upon death, with a closely aligned tax treatment for *inter vivos* wealth transfers, has key advantages. It prevents the perpetual transfer of unrealised capital gains over generations by ensuring taxation is triggered by the end of an individual's lifetime, a concern that is even more notable in countries that do not levy inheritance taxes.[48] This can improve equity given the concentration of unrealised gains among the largest estates.[49] Taxing gains upon death can also improve efficiency by mitigating the lock-in effect created by the step-up in basis and can increase revenues. One estimate from the United States finds that taxing capital gains at death would raise USD 204 billion of revenue over ten years (Penn Wharton, 2020[104]). Some recent proposals suggest taxing unrealised gains at death at a higher rate than the rate that would apply to gains realised during life in order to offset the lock-in effect (see, for example, Rosenthal and McClelland (2022[105])).

The taxation of unrealised gains at death presents some advantages over the carry-over basis of taxation. A common alternative approach to deeming the realisation of unrealised capital gains upon death is to tax gains upon realisation on a carry-over basis.[50] The carry-over basis can mitigate lock-in effects for the testator but exacerbate them for the beneficiary. This possibility is especially acute if assets have been held for long periods of time, including over generations, leading to a large tax liability when they are ultimately sold. While the carry-over basis would also present challenges associated with tracking the original cost basis of assets, this shortcoming should be weighed against the potential difficulty of revaluing the capital gains tax basis at the point of the testator's death under a step-up in basis.[51]

The challenges to taxing unrealised gains upon death are less significant than generally assumed. Valuation, a commonly cited challenge, has little justification since the new asset basis will need to be determined anyway upon realisation to calculate taxes due if a step-up in basis is provided. Furthermore, assets often need to be valued anyway when they are transferred at death (Kopczuk, 2013[106]). Concerns about overpayment due to incorrect valuations could also be mitigated through a reconciliation upon the eventual sale of the asset (see also the approaches discussed in section 6.2.3). Another common concern is that individuals would lack the liquidity to pay accrued taxes on death, which may be greater than under accrual-based taxation or the carry-over basis. Such a concern could be addressed through options for loans, payments in instalments, or options to prepay the tax liability at a discount (Slemrod and Chen, 2023[74]).

Exit taxes

Exit taxes can play an important role in strengthening the capital gains tax base. Exit taxes ensure individuals pay taxes accrued on unrealised capital gains before they cease to be tax liable in a country,

[48] As outlined in section 5.2, the step-up in basis is a major source of the lock-in effect, encouraging taxpayers to hold on to their assets until they die. While this basis is more common when countries tax inheritances or estates, narrow inheritance or estate tax bases often mean that a large share of unrealised gains are also not captured under inheritance or estate taxes.

[49] In the United States, for example, the share of unrealised capital gains was projected to be 46% for estates exceeding USD 50 million over the period between 2013 and 2023, compared with 6% for estates smaller than USD 2 million (Avery, Grodzicki and Moore, 2015[138]).

[50] As discussed in section 3.5, under the carry-over basis of taxation, the tax liability for unrealised capital gains passes to the beneficiary upon the death of a donor. Capital gains taxes are levied only when the beneficiary sells the asset but are levied on the total increase in value since the testator acquired the asset.

[51] One way to address challenges of tracking the original cost basis is to stipulate a "default basis" (e.g., 10% of the sale price), which would apply if taxpayers are unable to prove the tax basis is higher than the default basis (Enda and Gale, 2020[132]).

curbing revenue leakage and discouraging tax-induced migration. Exit taxes can also improve vertical equity – evidence suggests that high net worth individuals respond relatively more strongly to tax changes and differentials by relocating (Kleven et al., 2020[107]; Moretti and Wilson, 2023[108]). However, the objective of deterring tax-induced migration and preventing tax leakage may need to be balanced against other objectives such as attracting and retaining talent and entrepreneurs, though no empirical research on the impact of exit taxes on inward migration and entrepreneurship is yet available.

Many challenges of exit taxation may be addressed through careful tax design and international cooperation. Like for the taxation of capital gains at death, many countries already have approaches to valuing different assets, while a reconciliation upon ultimate sale of the asset may rectify inaccurate valuations. Such approaches would be preferable to excluding certain assets from the exit tax base, which can lead to investment distortions and reduce equity and revenues. Liquidity concerns can also be addressed through options to defer payment, potentially with an interest charge and with a requirement to provide a security or guarantee to ensure the country of departure can recover the revenues. Options to defer can also be used to overcome legal or constitutional hurdles.[52] The administrative burden of having to levy an exit tax on potentially low-value assets can be addressed through a minimum threshold for taxation applying to assets with readily available market values such as shares. International cooperation is also key to effective exit taxation, for instance by allowing countries to track whether assets are sold and to recover exit tax claims, as well as to prevent double taxation across jurisdictions. Further work could explore some of these issues in greater detail.

Deemed realisation of capital gains on assets used to back loans

Deeming the realisation of gains on assets used to back loans has also recently been proposed to ensure that asset appreciations that confer financial benefits to individuals are taxed. Some individuals at the very top of the distribution have been found to minimise their taxes by not realising gains, and instead using appreciated assets as collateral against loans to finance consumption (section 5.2). One new proposal suggests taxing the portion of appreciated assets used to obtain loans, by deeming assets equivalent to the value of the loans as having been sold. Under a proposed "billionaire borrowing tax" by Fox and Liscow (2024[109]), "major assets" (e.g. shares) of high net worth households would be assumed to be sold when individuals borrow against them. The authors propose that when gains are ultimately realised, the value of the asset that the owner already paid tax on would be the new capital gains basis.

The proponents of this tax offer design suggestions aimed at mitigating some of the challenges linked to its implementation. To facilitate valuation, Fox and Liscow (2024[109]) propose that the assets presumed to be backing the loan be limited to significant shares in business interests and major shareholdings such as land, which are easier to value. Individuals not having the liquidity to pay the tax is also a lesser concern when individuals have accessed cash through loans. The administrative burden of levying a borrowing tax can also be reduced if taxpayers are required to report their borrowing in the same way as those with mortgage interest report their borrowing and if the process is supported by third-party reporting from banks (Fox and Liscow, 2024[109]). The pros and cons of such a tax would merit further examination.

6.2.2. Retrospective taxation

Another potential adjustment to realisation-based capital gains taxation is retrospective taxation. Retrospective taxation involves taxing capital gains upon realisation but offsetting the tax deferral advantage by taxing gains from longer-held assets more heavily (Auerbach, 1991[110]). No OECD country applies retrospective taxation, but the academic literature has proposed different potential designs. Earlier

[52] For example, the option to defer the tax until sale has been used to improve the compatibility of exit taxes with EU freedom of establishment rules.

retrospective tax proposals have suggested taxing the expected, rather than actual, gain on an asset.[53] More recent proposals suggest that a hypothetical asset price path can be used to calculate the annual accrued capital gains tax liability (Box 6). Annual tax liabilities are then revalued to the realisation year using an assumed interest rate and added to the capital gains tax due upon sale. The tax burden on realised capital gains therefore increases as a function of the holding period.

Box 6. Approaches and assumptions under retrospective taxation

Different approaches and assumptions can be applied under the retrospective taxation approach, often trading off simplicity and accuracy.

Estimating the price path

Assumed asset price paths can vary. The most accurate price path would approximate an asset's true value trajectory over a holding period. However, doing so may be administratively complex and difficult for hard-to-value assets. Under a constant price path assumption, on the other hand, assets are assumed to have grown at a constant rate over the holding period, yielding equal gains every year. The assumption is attractive for its simplicity, and a number of studies propose it as a feasible alternative (e.g., Fellows (1990[111]), Grubert and Altshuler (2016[36]), Miller (2016[112])). However, assuming a constant price path means that assets that earned above-normal returns early in the holding period would be under-taxed and those that appreciated late in the holding period would be over-taxed (Auerbach, 1991[110]). Those that appreciate early may also still be subject to a greater lock-in effect, since an investor anticipating normal future returns from the asset would be able to spread the accrued tax liability over several years by holding onto the asset (Auerbach, 1991[110]).

Calculating capital gains tax liability

Calculating the annual tax liability on assumed accrued gains requires looking back at individuals' tax situations for every year of the holding period. Doing so is straightforward where flat taxes would have applied to capital gains. However, countries with comprehensive tax systems or those whose capital gains tax policies that have changed over the holding period may face greater challenges. Simpler approaches include calculating capital gains tax liabilities based on individuals' average marginal tax rates over a recent timeframe. However, approaches such as these are less precise and can lead to inequitable outcomes, particularly for individuals with volatile incomes.

Interest rate assumption

Different interest rates could be used to rebase annual tax liabilities to the realisation year. Deferred accrued taxes are effectively a loan from the government to an individual. The government could charge interest based on an appropriate government lending rate or the yield on short-term government bonds (Fellows, 1990[111]). However, some argue that because of the greater risk of default by private borrowers, the rate should exceed the risk-free rate and be based on the taxpayer's cost of borrowing (Gergen, 1993[113]), although determining different individuals' credit risks would be administratively challenging.

Retrospective taxation can reduce lock-in effects and opportunities for tax arbitrage with potentially lower administrative costs than other alternatives. Depending on its design (i.e., applied with or without

[53] These earlier proposals suggested that capital gains tax can be calculated by assuming an asset will appreciate at a predetermined rate or expected return (e.g., the risk-free rate) (for example, Auerbach (1991[110]), Bradford (1994[130]), Land (1996[131])).

simplifying assumptions), retrospective taxation can entirely or partially offset the deferral advantage of a realisation-based tax and reduce tax arbitrage incentives. Under the approach, taxpayers would not face liquidity issues as they do not pay tax on capital gains until the asset is sold. Estimating a hypothetical value trajectory based on sale price can also be administratively less burdensome than annual valuations under the accrual-based approach (see section 6.2.3), particularly if simplifying assumptions are used to calculate the hypothetical price path.

Retrospective taxation nevertheless comes with some challenges. Imputed price paths may not perfectly approximate the evolution of an asset's value, and simplifications like an assumed constant return over the life of an asset may not fully counter lock-in effects. However, some also argue that compared with the limitations of realisation-based taxation, concerns about over- or under-taxation using a simplified approach such as a constant rate of return assumption are minor (Fellows, 1990[111]).[54] Retrospective taxation can also be argued to exacerbate the lock-in effect by increasing the taxes due upon realisation, decreasing rather than increasing the incentive to realise gains. Another criticism of the approach is that it can increase the complexity of tax systems, requiring taxpayers to perform potentially complex calculations to make investment decisions. It may also present compliance and administrative hurdles, although technological developments are likely to have mitigated some of these concerns.[55] Some recent proposals have suggested hybrid accrual/retrospective taxation targeted at wealthy individuals (see section 6.2.3).

6.2.3. Accrual-based taxation

Accrual-based capital gains taxation involves taxing asset appreciations on a yearly basis. The approach aligns with the Haig-Simons definition of income as the sum of consumption and the change in an individual's net wealth (Simons, 1938[93]). With a few specific exceptions[56], OECD countries do not levy capital gains taxes on an accrual basis. It should be noted, however, that other taxes may effectively tax (some) unrealised capital gains on a recurrent basis. For instance, while annual wealth taxes are levied on overall individual net wealth, the appreciation in asset values would be taxed every year if taxes are based on regularly updated asset values. Another system, which currently applies in the Netherlands and to specific assets in New Zealand[57] involves taxing deemed or presumptive returns. The Netherlands is now proposing to replace the system with accrual-based taxation (see Box 7).

Accrual-based capital gains taxation presents some advantages. It mitigates some of the negative equity, efficiency, and revenue implications of realisation-based taxation. A clear advantage of accrual taxation is the elimination of the lock-in effect and the removal of most incentives for tax arbitrage. Since capital gains are taxed as they accrue, there is no tax deferral advantage. Furthermore, taxing capital gains every year would remove the incentives to recharacterise labour income as capital gains – if taxed at similar rates – and eliminate the possibility of intertemporal income shifting via capital gains. As a result,

[54] Fellows (1990[111]) argues that if the expected return on an asset is less than the historical return but higher than the expected return for an alternative investment opportunity, the taxpayer has no economic incentive to liquidate the asset to maximise after-tax returns. However, if a taxpayer expects the market price to increase, the averaging technique would allocate profits in higher years to earlier years, prompting taxpayers to sell the asset, pay the tax or obtain a refund, then rebuy the asset. The paper argues that policy makers can circumvent this behaviour by allowing taxpayers to elect to pay the tax or obtain a refund at any time before the realisation event, but in practice, the cumbersomeness of an election provision and valuation difficulties make ignoring sales and repurchases the only practical response.

[55] See, for example, the discussion in OECD (2006[63]).

[56] See footnote 10.

[57] The deemed returns approach currently applies to household savings in the Netherlands, although the approach is being reformed. New Zealand also applies an annual tax on foreign portfolio share investments at a deemed 5% of open market value at investors' marginal tax rate.

accrual-based taxation could allow for higher tax rates as well as higher and more immediate tax revenue. Finally, accrual-based taxation may act as a built-in economic stabiliser – during share market downturns, individuals accrue capital losses that reduce their tax liability, while having a dampening effect when stock markets boom (Burman, 2009[51]).

However, the taxation of capital gains upon accrual comes with challenges. Taxing unrealised gains calls for regularly valuing assets, which can be difficult for those that are infrequently traded. While updated market values are readily available for publicly listed companies, obtaining accurate annual valuations of assets such as private businesses, which are a major asset class for the wealthiest households (see section 2), can be more challenging and administratively costly than one-off valuations. Liquidity issues arising from taxing gains upon accrual is another concern, though some evidence suggests that such issues may be less significant than commonly believed[58] (Ministerie van Financiën, 2022[114]) and, as discussed above, options for tax payments in instalments or tax deferral can be used to ease liquidity pressures. Asset price fluctuations can also lead to significant volatility in revenues collected from accrual-based capital gains taxes. A related policy challenge is the tax treatment of losses, including asset depreciation. Taxing unrealised gains but not providing tax refunds for losses or depreciation[59] may be seen to be inequitable and can undermine neutrality between investments with different levels of risk. On the other hand, issuing tax refunds can be costly and challenge governments' abilities to deliver balanced budgets during economic downturns. From a political perspective, there may also be resistance to levying taxes if actual gains do not materialise from "paper gains". A recent survey from the United States found that respondents strongly preferred to wait to tax gains on publicly-traded stocks until sale as opposed to taxing unrealised gains each year (Liscow and Fox, 2022[115]).

Some recent proposals involve taxing unrealised capital gains on certain assets. Toder and Viard (2016[116]) propose taxing gains on publicly-traded assets on an accrual basis with provisions for taxpayers to smooth their tax liability over multiple years, so large fluctuations in asset prices do not lead to significant volatility in tax payments. The approach also mitigates liquidity issues in years of significant asset price growth. The proposal maintains the realisation basis for closely-held businesses. However, the authors propose taxing unrealised capital gains at death so all gains would ultimately be taxed. Other proposals have similarly advocated for an accrual-based tax on the publicly-traded assets of HNWIs, combined with a retrospective tax (see section 6.2.2) for non-publicly traded assets. A proposal by Miller (2016[112]), for example, involves taxing the publicly-traded shares of the 0.1% wealthiest and highest-earning taxpayers under an accrual-based tax, while all non-publicly traded assets would be taxed retrospectively, assuming assets appreciate at a constant rate over the holding period.[60] Taxpayers would have the option to calculate an accrual-based tax on non-publicly traded assets and deposit an amount of tax based on that valuation, with any overpayments being credited against the final tax due upon a sale.

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[58] Research by the Dutch Ministry of Finance found that in 2018 and 2017, approximately 1% of taxpayers who owned illiquid assets subject to a deemed rate of return (0.4% of all taxpayers subject to the deemed return) were unable to pay their total income taxes, although the tax may not have been the reason for the inability to pay taxes for some. Of the 1%, between 90% (2018) and 96% (2017) were able to pay their income tax after making use of a payment deferral scheme. A simulation using a model based on empirical data was also used to test whether liquidity issues would grow under an accrual-based tax system and finding that, on average, the liquidity issues would not increase (Ministerie van Financiën, 2022[114]).

[59] Setting accurate depreciation schedules for different assets is particularly challenging and may lead to a distortion in investment choices in favour of assets for which tax allowances exceed true economic depreciation (Adam and Miller, 2021[133]).

[60] See a conceptually similar proposal by Wyden (2019[125]) from the United States. However, under the proposal, only individuals who meet the income or asset thresholds for the three preceding years would be subject to accrual-based taxation, and the proposal discusses different options to calculate the retrospective tax on unlisted assets (Wyden, 2019[125]).

Some challenges would remain under these new proposals. Proposals that maintain the realisation basis of taxation for non-publicly traded assets would likely see distortions in investment choices in favour of those assets and create an incentive for companies to become or remain unlisted. This risk would be somewhat mitigated if accrual-based taxation is combined with a retrospective tax on non-publicly traded assets. Doing so would also reduce the deferral advantage from holding non-publicly traded assets, improving equity since individuals with high income and wealth more commonly hold such assets. However, any simplifications in calculating the retrospective tax due on non-publicly traded assets may retain inequities and maintain some deferral advantage and tax arbitrage opportunities.[61] Determining which assets to make subject to accrual-based taxation may also be a challenging decision.[62] Furthermore, the recent proposals present a greater administrative burden than realisation-based taxation. While the burden would be lesser if only HNWIs are targeted, doing so would still require determining which individuals fall within the scope of the tax and may increase tax avoidance behaviours that lead to bunching below the threshold for taxation.

Another recent proposal advocates for taxing all unrealised capital gains for high net worth individuals. Saez, Yagan, and Zucman (2021[26]) propose a "capital gains withholding tax" on unrealised gains for taxpayers with net worth over USD 50 million. Under the proposal, the tax would be paid via annual payments of one-tenth of the federal capital gains tax[63] rate until 90% of the amount owed at realisation is attained. Death and charitable gifts would be treated as realisation events for high earners. The annual withheld amount would be a prepayment that is credited against the final tax liability upon realisation, reducing risks of over-taxation by inaccurate valuations. Taxpayers would be eligible for a government loan backed by illiquid assets to pay the accrued taxes, addressing liquidity concerns. The authors suggest ways to value private businesses, such as using a formula based on book value, profits and sales from recent years, in line with the approach used in the implementation of wealth taxes in Switzerland. For larger unlisted businesses, the authors propose valuation based on recent trades, industry valuations, or recent stock issuance to new investors. Finally, the withholding tax would smooth payments over many years to make tax liabilities and government revenues less volatile.

The proposal would address many key challenges of pure accrual-based taxation, but others may remain. The proposal by Saez et. al. to extend accrual-based taxation to all HNWIs' assets includes approaches to value non-publicly traded assets that have precedent in some countries, although their feasibility for others may depend on data availability and country-specific circumstances.[64] Determining who is liable for the tax would add to the administrative cost, and like other proposals that target HNWIs, may incentivise tax avoidance behaviours that artificially keep assets below the threshold for accrual-based taxation.

[61] See also section 6.2.2 above.

[62] This is particularly true if close substitutes for some assets are not subject to accrual taxation (for example, derivatives on publicly traded stocks as substitutes for shares). Close substitutes such as these may therefore need to fall within the scope of accrual taxation (Schenk, 2003[129]).

[63] Their proposal is to tax capital gains at 39.6% for taxpayers with taxable income above USD 1 million.

[64] An alternative option, discussed but not proposed by the authors, is to circumvent valuation challenges by allowing individuals to make an in-kind payment in the form of company shares. Such an approach would also largely address liquidity concerns, as would the proposal to make available a risk-free government loan program. However, it may prove unpopular and may face legal impediments in some countries. See a similar proposal, in the context wealth taxation, in Galle et. al, (2023[136])

Box 7. Evolution of the Netherlands' deemed rate of return model and transition to accrual-based taxation

In the Netherlands, a deemed return approach, also known as the "Box 3" tax system, applies to household savings (e.g., bank deposits, non-substantial shareholdings). This tax is based on a deemed return on the value of the individual's net wealth. No tax applies when an asset is purchased, when distributions are made or when capital gains are realised. The deemed gains are intended to reflect an average of realised gains as well as unrealised gains. Until recently, the deemed return rate was based on the assumed mix of investments which changed as the value of individuals' capital increased. Individuals with greater wealth were assumed to have a greater share of "investments" compared with "savings". Capital valued below a threshold was tax-free, while the deemed return increased with greater capital values, as the ratio of deemed investments to savings was assumed to increase. This design was based on the assumption that individuals with greater capital invested in riskier assets that generate higher returns. A deemed rate of return on savings and investments was then applied to the deemed income and taxed at a flat 31% tax rate.

However, in a December 2021 judgment, the Dutch Supreme Court found the system to be illegal and the government implemented a compensation scheme. The Ministry of Finance subsequently stated that the system meant that individuals with high-value assets who invested relatively conservatively were overtaxed under the assumptions about the distribution of taxpayers' assets. Conversely, individuals who invested predominantly in real estate sometimes paid too little tax compared with gains due to house price increases. The government offered compensation to individuals who overpaid taxes for the years 2017 to 2022 through a new calculation that better approximated returns.[65]

The Dutch government subsequently reformed the deemed rate of return approach, but the new provisional system has also been found to be illegal. From 2023, "Box 3" income had been computed based on the approach of the compensation scheme, where the return is deemed based on actual distributions of assets. The rates of return are also intended to be closer to the actual rates of return on "Box 3" income. A 32% tax rate is then applied to the deemed income.[66] However, in June 2024, the Dutch Supreme Court issued rulings declaring that the reformed system remains illegal and that only actual returns on assets may be taxed.[67] This court ruling implies that a provisional dual system will in place from 2025. Taxes are initially levied on a deemed return basis, after which taxpayers may request to instead be taxed on an accrual basis (on all assets including real estate) if this leads to a lower tax payable. This system will be in place until the new system goes into effect.

In September 2023, the Dutch government published their design of a new "Box 3" system based on actual accrued rather than deemed returns, to be in place from 2028. The plan involves taxing both direct income and unrealised capital gains on an accrual basis, except for real estate and shares in start-up companies, whose gains will be taxed on a realisation basis.[68]

[65] Plan voor belasting over werkelijk rendement en opties voor rechtsherstel box 3 | Nieuwsbericht | Rijksoverheid.nl

[66] As part of the 2024 Budget plan, the government proposed an increase in the rate to 34%.

[67] Hoge Raad: box 3-heffing nog steeds discriminerend - Hoge Raad

[68] Kamerbrief over toekomstig stelsel box 3 | Kamerstuk | Rijksoverheid.nl

7 Conclusions and policy directions

This paper shows that capital gains benefit from more favourable tax treatment than other forms of income in OECD countries. Favourable tax treatment includes lower tax rates than those applied to other forms of income, as well exemptions or deductions. Taxation upon realisation also provides the benefit of tax payment deferral. Capital gains on certain assets, such as owner-occupied housing and closely-held businesses, may also benefit from further relief. Approaches vary regarding the tax treatment of capital gains upon death or departure from a country, and in some countries such events make it possible for accrued capital gains to escape taxation.

Different rationales are put forth to justify favourable capital gains taxation, but the supporting evidence is mixed. There is little evidence to support the view that capital gains tax relief significantly increases aggregate savings, or that increases in aggregate savings would result in higher domestic investment. Research suggesting that capital gains tax relief encourages entrepreneurship is limited to certain types of investors, and more generally, even if capital gains tax relief may have an impact, other tax and non-tax policies may be more effective. Some rationales, such as compensating individuals for double taxation or the taxation of inflationary gains, present a stronger case for relief, although targeted forms of relief could more directly achieve these goals.

In practice, a number of challenges arise from the current tax treatment of capital gains. Favourable capital gains tax treatment can lead to economic distortions, such as shifts from labour to capital income, and distortions in investment and profit distribution choices. It reduces horizontal equity as individuals with similar income levels but from different sources face different tax liabilities, as well as vertical equity, as individuals with high income and wealth receive a disproportionate share of both realised and unrealised capital gains. The realisation basis of taxation also makes it possible for individuals to strategically defer or time the realisation of capital gains. Ultimately, the favourable tax treatment of gains is a significant driver of low effective tax rates among high-net-worth individuals. By providing opportunities for tax avoidance, existing capital gains tax systems also reduce the potential to raise more revenue through increases in capital gains tax rates.

Alternative approaches to taxing capital gains have been proposed, including more targeted forms of relief. Broad forms of capital gains tax relief such as full or partial exemptions generally over- or under-compensate individuals for double taxation, the lumpiness of capital gains realisations, and the taxation of inflationary gains. In some cases, more targeted measures may be more effective. For example, inflation indexation can avoid the taxation of inflationary gains, while income smoothing provisions can address the lumpiness of realisations. However, practical constraints regarding the implementation of such measures call for careful consideration.

Other proposals involve adjusting or replacing the realisation basis of taxation to reduce lock-in effects and tax minimisation. These include maintaining realisation-basis taxation but deeming the realisation of capital gains upon specific events, imposing a deferral charge through retrospective taxation, or shifting from realisation-basis taxation to taxing capital gains as they accrue. The pros and cons of these various options need to be carefully considered. However, deeming the realisation of gains upon certain events (e.g. death, particularly where no or low inheritance tax applies, or emigration) can play an important role in strengthening realisation-based capital gains taxes by preventing some gains from fully escaping taxation and may involve fewer trade-offs than other potential reforms.

Further OECD work will expand upon the insights from this paper. Further work will bring together findings from this paper, previous OECD work and additional work on capital taxation to evaluate the relative merits of different potential policy reforms. It will include a consideration of recent findings from the optimal taxation and empirical literature to evaluate different approaches to taxing capital and increases in asset values. The work will consider the interactions between different types of taxes – such as those imposed on individuals' dividends, capital gains, and wealth, as well as corporate income taxes – and discuss the merits of reform options with reference to different country contexts.

Annex A. Capital gains taxation of different assets

Table A A.1. Capital gains tax treatment of different assets in OECD countries, 2023

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
Australia	Exempt	50% of the value of gains is exempt from taxation if the asset has been held for more than one year. The remainder is taxed progressively under the same tax rate schedule as labour income.	Taxed progressively under the same tax rate schedule as labour income.	Taxed progressively under the same tax rate schedule as labour income.	50% of the value of gains is exempt from taxation if the share has been held for more than one year. The remainder is taxed progressively under the same tax rate schedule as labour income.	50% of the value of gains is exempt from taxation if the business has been held for more than one year. Further tax relief is available on the sale of active assets (business assets of an individual for at least 7.5 years (if owned for more than 15 years) or half of the period (if owned for 15 years or less)): - Small business 50% active asset reduction: An additional 50% exemption. - Small business 15-year exemption applies to asset that have been owned for at least 15 years and the owner is 55 years old or older and retiring. - Small business retirement exemption: A complete exemption applies to the sale of assets up to a lifetime limit of AUD 500 000 if individual. are not eligible for the small business 15-year exemption.

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
						This further tax relief is also contingent on eligibility conditions. For example: Total value of an individual's capital gains tax assets must not exceed AUD 6 million, or the individual must have annual turnover less than AUD 2 million. The individual must also own at least a 20% stake in the company.
Austria	Exempt	Individuals can choose between a flat capital gains tax rate (30%) or taxation under the same progressive PIT schedule as wage income.	Gains subject to a final withholding tax (27.5%).	Individuals can choose between a flat capital gains tax rate (27.5%) or taxation under the same progressive PIT schedule as wage income.		
Belgium	Exempt	Taxed at a flat capital gains tax rate (16.5%), exempt if held for longer than five years.	Generally exempted, with some exceptions: If the bond has been issued at a discount (to par), the difference between that price and the actual face value of the bond will be subject to withholding tax. If the transaction leading to the gain is deemed to be 'speculative', the capital gains will be taxed at a flat rate. If the bonds have been held in the context of professional management,	Not taxable to individuals when held in a capacity other than professional management of a private fortune. Capital gain taxes apply outside the professional context for sales to a non-EU company of substantial holdings in a Belgian company and on sales of property in certain circumstances, subject to a flat tax rate (16,5%, increased to 33% if the transaction is deemed to be 'speculative'). Capital gains on shares held in the context of professional management are taxed (i) progressively under the same tax rate schedule as labour income if the shares were held no longer than five years and (ii) at flat rate (16.5%) when the shares were held more than five years.		

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
			the capital gains will be taxed at a flat rate when the bonds are deemed to be a 'durable investment' and were hold for more than five years. In other cases, the capital gains in the context of professional management will be taxed progressively under the same tax rate schedule as labor income.			
Canada	Exempt	50% of the value of gains is exempt from taxation. The remainder is taxed progressively under the same tax rate schedule as labour income.				50% of the value of gains is exempt. The Lifetime Capital Gains Exemption also exempts income from the remaining 50% of sales of business shares (among certain other assets) up to a lifetime limit of CAD 971 190. To qualify for the further exemption, the company must be a qualifying small business corporation e.g., Canadian-controlled private corporation where 90% or more of the fair market value of the assets are used mainly in active business carried out primarily in Canada and more than 50% of the business's assets must have been used in an active business in Canada for 24 months prior to the sale.
Chile	Real gains (adjusted for inflation) are tax exempt up to a cap of 8 000 UF.			Real gains (adjusted for inflation) are added to other income from work and capital and subject to the same tax rate schedule as labour income. Exemption of 10 UTA applies or 20 UTM if the taxpayer is a small taxpayer.		

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
Colombia	Income above an exemption of 5 000 UVT is taxed at 15%.	Subject to a flat tax of 15%.		Gains on shares held for less than two years are taxed progressively under the same tax rate schedule as labour income.	Subject to a flat 15% tax rate.	
Costa Rica	Exempt	Gains above CRC 100 000 are taxed at a flat 15% rate. No tax applies if gains are used for the acquisition of another property for residential purposes.	Subject to a flat tax of 15%.			
Czechia	Gains are taxable if held for five years or less; or two years or less if the taxpayer's main residence (unless the gains are used to finance a new residence in which case not taxable even if held for two years or less). If taxable, gains are subject to the same tax rate schedule as labour income.		Income above an exemption threshold of CZK 100 000 is subject to the same tax rate schedule as labour income.		Full exemptions apply after three years for direct ownership of securities (such as shares of a joint stock company) and five years for shares in other companies not represented by a security.	
Denmark	Exempt	Taxed as capital income, subject to a progressive rate schedule up to 42%.		Subject to a 27% tax rate up to the first 58 900 DKK, and 42% thereafter. Shares that are held in an Investments Savings Account (ISA) are subject to mark-to-market taxation by a flat rate of 17%. The maximum deposit on the account is 106 600 DKK (2023).		Gains from the sale of an incorporated business are subject to the same tax rate schedule as shares. Otherwise, the gains are taxed as personal income.
Estonia	Exempt	Subject to a flat 20% tax rate.				
Finland	Exempt	Subject to a 30% tax rate for the first EUR 30		Subject to a 30% tax rate for the first EUR 30 000, and 34% thereafter. The taxable capital		

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
		000, and 34% thereafter.		gain is calculated by deducting the acquisition costs and sales costs from the sales price. A minimum deduction of 20% of the sales price is applied. If the property has been held for at least ten years, the minimum deduction is 40%.		
France	Exempt	Subject to flat withholding tax plus social levies. A reduction is provided if held more than six years. Untaxed if held for more than 22 years (withholding tax) and 30 years (social taxes).	Individuals can choose between a flat capital gains tax rate or capital gains taxation under the same progressive tax rate schedule as wage income. If shares were purchased before 2018, gains for individuals who opt for taxation under the progressive PIT schedule are subject to exemptions that vary with the holding period: 50% if shares that have been held for at least two years and less than eight years and 65% if shares have been held for at least eight years. If the gains relate to SME shares, the gains are subject to different exemption rates and holding periods: 50% if shares have been held for at least one year and less than four years; 65% if shares have been held for at least four years and less than eight years; 85% if shares have been held for at least eight years.			Reduced CGT rates or exemptions apply to gains from the sale of small to medium sized businesses subject to a 5-year holding period. - *L'exonération des plus-values professionnelles en fonction du prix de cession* : full exemption applies for assets whose sale price is less than EUR 500 000. Partial exemption applies to assets whose sale price is between EUR 500 000 and 1 000 000. To be eligible, the individual must be either an individual entrepreneur, manager of a partnership, partner of company or a company subject to corporation tax. They must employ less than 250 employees, achieve an annual turnover of less than 50 million euros or have a balance sheet total of less than 43 million euros. - *Exonération des plus-values des petites entreprises*: exemptions from capital gains tax on sale of small businesses : For retail companies: full exemption up to 250 000 and partial exemption for the next EUR 100 000. For service companies: full exemption if

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
						turnover less than EUR 90 000 and partial exemption for the next EUR 36 000. To be eligible, the individual must be an individual entrepreneur, a company director subject to income tax, or a partner subject to income tax. The transferring partner must carry out his activity in the company. The company's annual turnover does not exceed EUR 350 000 for retail companies and EUR 126 000 for service companies. - Retirement relief: Full exemption subject to conditions. the individual must have sole ownership or be in a business partnership. They must employ less than 250 employees, achieve an annual turnover of less than 50 million euros or have a balance sheet total of less than EUR 43 million.
Germany	Subject to the same tax rate schedule as wage income. No taxation if occupied by the owner since acquisition or construction, or for at least 2 years before the year of sale or if held for more than 10 years.	Subject to the same tax rate schedule as wage income. Exempt if held more than 10 years.	Individuals can choose between a flat capital gains tax rate (25% plus a 5.5% solidarity surcharge) or capital gains taxation under the same progressive PIT schedule as wage income. A flat exemption amount applies (EUR 1 000 in 2023).			Gains on the sale or disposal by an individual of all or part of a business, or partnership interest, are treated as "income from commercial business activity". An exemption of up to EUR 45 000 (under certain circumstances) is granted if the seller is 55 years of age or older. The remainder is taxed at a lower rate than ordinary income. If the taxable income does not exceed EUR 5 million, the individual may apply for a reduced tax rate. This rate is 56% of the average tax rate that would apply under normal income tax calculations, but it cannot be less than 14%. This tax benefit is available only once in a taxpayer's lifetime.

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
Greece	Exempt	Exempt	Subject to a flat tax of 15%.			
Hungary	The taxable capital gain is reduced by an increasing percentage each year and is exempt after five years.	The taxable capital gain is reduced by an increasing percentage each year and is exempt after five years.	Subject to a flat tax rate of 15%.			
Iceland	Exempt	Income above a fixed exemption amount of ISK 300 000 is subject to a flat 22% tax rate.				
Ireland	Exempt	Income above a fixed exemption amount of EUR 1 270 is subject to a flat tax rate of 33%.	Income above a fixed exemption amount of EUR 1 270 is subject to a flat tax rate of 33%.	Income above a fixed exemption amount of EUR 1 270 is subject to a flat tax rate of 33%.		Income above a fixed exemption amount of EUR 1 270 is subject to a flat tax rate of 33%. However, certain reliefs apply. Entrepreneur's Relief provides for a favourable capital gains tax rate of 10% on gains from the disposal of qualifying business assets. Where a business is carried on by a company, individuals must own at least 5% of the ordinary shares in the qualifying company or 5% of the ordinary shares in a holding company of a qualifying group. Entrepreneur's Relief only applies if the individual has owned the business assets for a continuous period of three years. The three years must be in the five years immediately prior to the disposal. Retirement Relief provides a full exemption from capital gains tax for disposals by retiring individuals up to fixed lifetime limits that vary depending on the age of the retiree and type of disposal. Must be either at least 55 years old or are unable to continue working due to ill health. If transferred to their child: Relief is unlimited if seller is between 55 and 65, and capped at EUR 3 000 000 if they are 66 or older.

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
						If the asset is transferred to a child, relief is unlimited if seller is between 55 and 65, and capped at EUR 3 000 000 if they are 66 or older. If transferred to a non-family member, full relief applies for assets with a market value up to EUR 750 000 if individuals are below 66 and up to EUR 500 000 for individuals 66 or older. Partial relief applies when assets exceed these thresholds.
Israel	Capital gains tax applies to real gains (adjusted for inflation) above a sale price of ILS 4.5 million.	Real gains (adjusted for inflation) taxed at a flat rate of 25%.	Taxed at a flat rate of 15%.	Real gains (adjusted for inflation) are subject to a flat tax rate which varies depending on whether the shareholder has more (30%) or less (25%) than a 10% stake in a company. If the shareholder owns more than a 10% stake in the company, their share of retained earnings are taxed as if dividends were paid immediately before sale).		Tax rate for the sale of business by an individual holding at least 10% share in the company is 25%
Italy	Exempt	Subject to a flat tax rate of 26%, exempt if held at least five years.	Subject to a flat tax rate of 26%.			
Japan	Taxed at a flat rate of 39.63% if held for less than 5 years, otherwise taxed at 20.315%.		Subject to a flat 20.315% tax rate.			
Korea	40% tax rate for holdings of less than one year. Exempt if held for two years or more unless the house is worth more than KRW 900 million.	40% tax rate for holdings of less than one year. Assets held for 5 years get a 15% reduction, while those held for 10 years get 38% reduction.		Subject to a flat tax rate which varies depending on whether the shareholder is a minority or majority shareholder and the size of the company distributing the dividend. The threshold for being a majority shareholder varies between securities markets. Minority shareholders are exempt from capital gains tax when trading listed shares on the exchange. Taxation (10, 20%) only applies to over-the-counter transactions of		Capital gains arising from the sale of shares in an unlisted SME are subject to 11% capital gains tax, inclusive of local income tax.

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
				listed shares and unlisted shares, and separate tax rate is not applied to long-term capital gains. This will change in 2025. Majority shareholders pay a flat 30% tax rate on the sale of shares. A lower 25% rate applies to majority shareholders realising gains exceeding KRW 300 million. A basic deduction of KRW 2.5 million is available for all gains.		
Latvia	Capital gains from the alienation of the real estate are not taxable, if the following criteria were fulfilled: - ownership = 60 months and the declared place of residence for at least 12 months until entering into the alienation contract; - ownership = 60 months and the only real estate owned for the last 60 months before the alienation; - the only real estate has been replaced with another functionally similar real estate 12 months before or after the alienation of the first real estate; - income from the disposal of real estate has occurred	Subject to a flat 20% tax rate.		Subject to a flat 20% tax rate.		

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
	in relation to the division of property in the case of dissolution of marriage, provided that it is the declared place of residence of both spouses at least 12 months until the day of entering into the alienation contract; - there has been a disposal of the real estate in accordance with the procedures specified in the Law On Alienation of Immovable Property for the Public Needs, provided that ownership = 60 months or the income is invested anew in functionally similar real estate within 12 months after alienation of immovable property for the public needs.					
Lithuania	Taxable unless place of residence for at least 2 years; or if less than 2 years and income is used within one year to purchase a new place of residence.	Taxed if held less than 10 years.		Capital gains over an exempt amount are taxed progressively under a more favourable tax rate schedule than wage income and short-term capital gains.		
Luxembourg	Exempt	If owned for less than 2 years, taxed on progressive income rates. If owned for more	Taxed progressively under the same tax rate schedule as labour income, exempt if held for longer than 6 months.			

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
		than 2 years, taxed at 21% flat rate.				
Mexico	Untaxed unless gain exceeds 700 thousand investment units, or have sold a house within the previous five years.	Subject to a the same progressive tax rate schedule as labour income, after accounting for allowable exemptions and deductions. For residents abroad and without a permanent establishment in the country, a flat tax of 25% applies to the gross sales value of the transaction without any deductions.		Real gains (adjusted for inflation) are subject to a flat tax rate of 10%. Gains received by majority shareholders are taxed progressively under the same tax rate schedule as labour income.		
New Zealand	Exempt from tax, although some gains are treated as ordinary income, such as if the property were acquired with the specific intent of disposal (which only occurs in limited circumstances).	Exempt from tax, although some gains are treated as ordinary income, such as if the property were acquired with the specific intention of disposal. Where the property is held for less than a specified holding period, capital gains will be taxable (holding period is 2 years from July 2024).	Taxed on an accrual basis over a threshold, realisation basis under that threshold.	Exempt from tax, although some gains from realisation of capital assets are treated as ordinary income when held on revenue account, e.g. where acquired with the specific intent of resale, or as trading stock. Deemed rate of return applies for portfolio investments in foreign shares.		Exempt

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
The Netherlands	Exempt	Annual deeming rates apply that are intended to capture both realised and unrealised gains. A flat tax of 32% applies to the deemed income. If the taxpayer's total capital does not exceed EUR 57 000, they are exempt.				Taxed on a realisation basis, with rollover relief possibilities, at a rate of 26,9%.
Norway	Exempt	Subject to a flat tax rate of 22%.	Subject to a flat tax rate of 22%.	A shielding deduction applies to capital gains on income from shares. Taxable gains above the deduction are subject to a flat 37.8% tax rate.		Subject to a flat tax rate of 22%.
Poland	Realised income from disposal of real property is subject to a flat rate of 19%, if disposal takes place less than five years after acquisition or construction of the asset. Moreover income from disposal of real property without five-year holding period may be exempt from taxation, if it is allocated to financing own housing purposes within three years from the end of the fiscal year (calendar year) in which the real property was sold.		Subject to a flat 19% tax rate.			Income gained from the sale of stakes in companies is subject to a flat 19% tax rate. In case of income gained by an individual from the sale of other business assets, the rules of taxation are the same as for income gained from regular business activity. They depend on the entrepreneur's choice. Individuals can choose among taxation under the same progressive scale (12% and 32% tax rates) as wage income, a flat tax rate (19%) or lump-sum taxation (tax rates depend on the sort of revenues).
Portugal	Exempt	Half of capital gains are taxed progressively under the same tax rate schedule as labour income.	Individuals can choose between a flat 28% capital gains tax rate or have 50% of capital gains taxed under the same progressive PIT schedule as wage income.			Only 50% of gains are taxable.
Slovak Republic	Exempt	Gains on properties held for less than five years are subject to the same tax rate schedule as labour income. Exempt after five years.		Gains above an exemption threshold of EUR 500 is subject to the same tax rate schedule as labour income.	Exempt	
Slovenia	Exempt	Subject to a flat tax that ranges from 0% to 25% depending on the holding period.	Subject to a flat tax that ranges from 0% to 25% depending on the holding period.	Subject to a flat tax rate of 25%.	Subject to a flat tax that ranges from 0% to 25% depending on the holding period.	
Spain	Taxed, but full rollover relief applies in respect of capital	Subject to a progressive tax rate schedule.	Subject to a progressive tax schedule that is more favourable than for labour income.			

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
	gains from disposals by any taxpayer of his primary residence. The exemption requires that the entire proceeds be reinvested within a 2-year period in the acquisition of another primary residence. Full exemption applies for taxpayers over 65 years old.					
Sweden	A proportion (22/30) of the capital gain is taxable at a flat rate of 30%.	A proportion (90 %) of the capital gain is taxable at a flat rate of 30%.	Listed shares are subject to a flat tax of 30%. For unlisted shares, proportion of the capital gain (5/6) is taxable at a flat rate of 30%. Bonds, funds and shares that are traded in a regulated market can be held in a special Investments Savings Account (ISA). Financial instruments that are included in the ISAs are subject to an annual taxation with special tax rules which replaces the conventional capital taxation of profits and gains. The estimated standard return, that is based on the government borrowing rate, is subject to a flat tax of 30%.			A proportion (2/3) of the capital gain up to a certain threshold is taxable at a flat rate of 30%. Capital gains above the threshold are taxed progressively under the same tax rate schedule as labour income up to a second threshold. Any gains above a second threshold are taxed as capital income at a flat tax of 30%.
Switzerland	All cantons levy an immovable property gains tax (*Grundstckgewinnsteuer*). The tax treatment of property gains may depend on factors including the holding period.		Gains on assets deemed to be private assets are exempt from tax. Gains on assets deemed to be professional assets are taxed progressively under the same tax rate schedule as labour income.			
Türkiye	Gains from disposition of gratuitously acquired houses and residences held for more than five years are exempt from tax. Gains from disposition of houses except the ones gratuitously acquired are exempted from PIT if the sum does not exceed the	Gains exceeding an exemption amount (TRY 33 000 for 2024) is subject to tax according to progressive income tax (15%, 20%, 27%, 35%, 40%).	Gains derived from corporate bonds are subject to a 10% final withholding tax rate.	Capital gains from shares in a fully fledged taxpayer corporation that is not traded in the stock exchange and is subject to taxation and needs to be included in a tax return if held for a	Shares not traded on the stock exchange and owned by full fledged taxpayer corporations are exempt from tax on condition that they are held more than 2 years (no tax return is required to be filed for this income).	

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
	exemption amount designated for the year of disposition (TRY 87 000 in 2024). The sum exceeding exemption amount is subject to tax according to a progressive income tax schedule (15%, 20%, 27%, 35%, 40%).			period of less than two years. If the inflation rate exceeds 10%, an inflation adjustment is applied to capital gains and a progressive tax scale is applied on declared earnings. (15%, 20%, 27%, 35% and 40%). Gains from listed shares owned by fully fledged taxpayer corporations and held for less than 1 year are subject to a final withholding tax at a rate of 0%.	Shares traded on the stock exchange and owned by fully fledged taxpayer corporations are exempt from tax on condition that they are held more than 1 year (no tax return is required to be filed for this income).	
United Kingdom	Exempt	Gains above an exempt amount of GBP 3 000 are taxed progressively under a more favourable tax rate schedule than wage income.	Qualifying corporate bonds are exempt from tax.	Gains above an exempt amount of GBP 3 000 are taxed progressively under a more favourable tax rate schedule than wage income.		Gains from the sale of at least a 5% share of a businesses held for at least 2 years may be subject to Business Asset Disposal Relief (BADR). The BADR provides a lower flat tax rate of 10% on the qualifying capital gain. A lifetime limit for the relief applies.
United States	Untaxed if capital gain of less than USD 250 000 (or USD 500 000 for married filing jointly) and held for at	Lower rate schedule applies for long term gains of more than one year. Gain attributable	Taxed progressively under the same tax rate schedule as labour income.	Taxed progressively under the same tax rate schedule as ordinary income.	Taxed progressively under a more favourable tax rate schedule than wage	Gains from the sale of Qualified Small Business Stock held for more than 5 years are tax exempt up to the greater of a cap ($10 million) or 10 times the taxpayers

Country	Owner-occupied residential property	Rented residential property	Corporate bonds	Shares (short-term gains)	Shares (long-term gains)	Closely-held business
	least 2 of the last 5 years. Otherwise taxed at marginal PIT rates for short-term gains, and at preferential long-term rates for long-term gains.	to any accelerated depreciation is taxable at ordinary rates. Gain attributable to straight-line depreciation is taxed at ordinary rates up to 25%.			income and short-term capital gains.	adjusted basis in all qualified small business stock issued by that firm and sold or exchanged by the taxpayer during that year. To be eligible, the investor must not be a corporation. The investor must have acquired the stock at its original issue and not on the secondary market. The investor must have purchased the stock with cash or property, or accepted it as payment for a service. At least 80% of the issuing corporation's assets must be used in the operations of one or more of its qualified trades or businesses.

Note: For Korea, whether a shareholder is considered a majority shareholder depends on their share of the market: In KOSPI market, more than 1% of shares or a market cap of 1 billion won or more; In KOSDAQ market, more than 2% of shares or a market cap of 1 billion won or more; In KONEX market, more than 4% of shares or a market cap of 1 billion won or more
Source: OECD WP2 Questionnaire on Top Income and Wealth Taxation; OECD Questionnaire on the Taxation of Household Savings; OECD Secretariat desk research.

Annex B. Holding period neutrality under the Norwegian rate of return allowance model

The Norwegian rate of return allowance reduces the lock-in effect for assets taxed upon realisation. This can be shown numerically by considering a shareholder who realises an accumulated capital gain at different points in time.

Following the example in Sørensen (2005[117]), if a shareholder realises a capital gain $M_t - B_t$ in period t, the tax liability T_t for that period would be:

$T_t = \tau(M_t - B_t)$ where M_t is the share price at *t*, B_t is the basis of the share at *t*, and τ is the tax rate

If the capital gain was instead deferred until $(t+1)$, and assuming no dividends are paid in the interim, the tax liability at $(t+1)$ would be:

$T_{t+1} = \tau(M_{t+1} - (1+i)B_t)$, where *i* represents the market interest rate and $(1+i)B_t$ is the stepped-up basis of the share which applies because no rate of return allowance was utilised for period *t*.

The difference between the two levels of income tax payable is therefore:

$$T_{t+1} - T_t = \tau(M_{t+1} - (1+i)B_t) - \tau(M_t - B_t)$$

$$= \tau\left[\left(\left(\frac{M_{t+1}-M_t}{M_t}\right)M_t - iB_t\right)\right]$$

$$= \tau\left[\left(\left(\frac{M_{t+1}-M_t}{M_t}\right) - i\right)M_t + i(M_t - B_t)\right]$$

$$= \tau\left(\left(\frac{M_{t+1}-M_t}{M_t}\right) - i\right)M_t + iT_t$$

Rearranging:

$$T_{t+1} = (1+i)T_t + \tau\left(\left(\frac{M_{t+1}-M_t}{M_t}\right) - i\right)M_t$$

The results shows that every year, the previous tax liability is effectively carried forward with interest as demonstrated by the term $(1+i)T_t$, reducing the tax advantage from postponing realisation from one period to the next.

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