

# THE EFFECTS OF INTRODUCING AN EXIT TAX IN SWEDEN

SVCA

Authors:

Sigurd Næss-Schmidt

Palle Sørensen

Benjamin Forsmann Barner Christiansen

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## Executive Summary

In November 2017, the Swedish Tax Authorities (Skatteverket) proposed a so-called exit tax on unrealized capital gains of physical persons emigrating from Sweden. The proposed exit tax will – if implemented – supersede the so-called “10-year rule” in Swedish tax law and is generally implemented with the aim of protecting the Swedish tax base.

However, the proposed exit tax might have some unintended adverse effects that are not accounted for in the impact assessment by Skatteverket. High Net-Worth Individuals (hereinafter HNWI) are globally mobile and will most likely react to the proposed exit tax:

- The mere discussions of an exit tax could imply that Swedish residents might accelerate plans to emigrate.
- Furthermore, highly productive foreigners considering moving to Sweden and Swedes living

abroad, but considering returning to Sweden, might be discouraged.

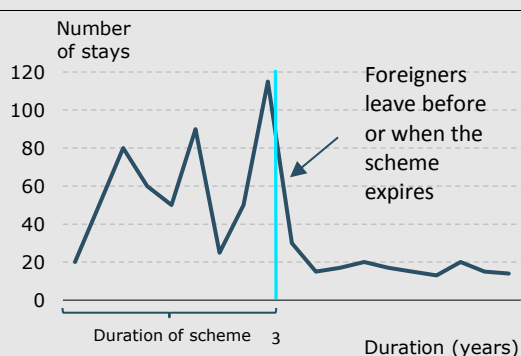
- In general, the exit tax will increase the effective tax level for foreigners planning to live in Sweden for an extended period. For foreigners planning to stay in Sweden for a limited period, the exit tax might shorten their stay, as the rule may create significant kinks in the tax schedule of such individuals, i.e. serve as an incentive to emigrate just before the exit tax becomes effective.

The effects of kinks in the tax schedule on the duration of stays of highly skilled foreigners are well documented in the literature. A prominent example of the consequences of kinks in the tax schedule on the duration of stays of immigrants is the preferential Danish tax scheme for foreign researchers and key employees, where hardly none of high-income immigrants stay after the scheme expires (3 years), see figure 1. Similar effects (or

**Executive Summary (continued)**

worse) will likely be observed if the exit tax is introduced.

**Figure 1 Duration of stays of foreigners on preferential tax scheme**



Source: Kleven et al. (2013), see report for details.

There are several reasons why this is problematic:

- HNWIs often contribute disproportionately to the overall tax revenue – not just through capital gains and dividend taxes, but also in terms of e.g. labor income tax, tariffs and VAT. For example, the top 1 percent of Swedish tax payers on average pay 2.7 times more in labor income tax than capital income tax.
- Many of these individuals are entrepreneurs who serve as an integral part of value creation in the economy.
- In addition, many of these individuals are likely also business angels who supply equity capital to smaller firms with limited or no access to formal capital markets.

Furthermore, the proposed exit tax may create substantial problems for individual business owners:

- Business owners with wealth invested in

illiquid assets may potentially have substantial difficulty in transferring ownership to meet up-front tax payments. This implies that Swedish entrepreneurs will be limited in their ability to take a business global.

- The exit tax may result in personal bankruptcies, as the government is taxing *unrealized* capital gains that might never be realized.
- Valuation of unlisted firms is costly, which leaves very little for the investors after taxes and valuation costs, especially for moderate capital gains.

Our study also suggests that the **revenue gains from the proposal could be substantially less than estimated in the impact assessment:**

- The expected revenue of the proposed exit tax is estimated for a period of high returns on equity. **A conservative estimate suggests that the long-term revenue is overestimated by approximately SEK 160 million per year.** Furthermore, recent economic forecasts suggest an even lower revenue in the short term.
- Indeed, relatively few individuals account for the bulk of the assumed revenue gains, which creates huge uncertainty. As an example, 68% of the estimated revenue in 2016 comes from five individuals who emigrated. This is equivalent to five individuals accounting for 32% of the total revenue over the full period of estimation (2014-2016).
- Our study also reveals that the expected revenue depends crucially on very few individuals, implying that the high mobility of HNWIs will most likely reduce the estimated tax revenue significantly. For example, if just 12 individuals of the 50 with the highest tax payments leave Sweden as a response to the proposal, the **exit tax will generate a net loss in tax revenue for a decade.**

### A short description of the proposal

In November 2017, the Swedish Tax Agency, Skatteverket, announced the proposal of an exit tax on individuals who cease to be tax resident in Sweden. The following prerequisites must be met for an individual to be subject to the tax:

- The individual must have had tax residence in Sweden for a least five out of the last ten years;
- The assets held by the individual must have an unrealized net gain exceeding an amount of SEK 100.000.

The exit tax proposal is an act against tax avoidance proposed with the intention of protecting the Swedish state from incurring losses in tax revenues from a reallocation of funds or beneficial transfers between relatives.

Individuals moving to a country within the European Economic Area (EEA) may defer the tax payment until the time that the asset is disposed, but with the tax liability being determined at exit. However, if the individual re-enters Sweden after a period within the EEA, holding the same asset portfolio as at the time of exit, the tax payment due will be set to zero.

For individuals moving outside the EEA, a deferral of the payment is restricted to cases where Sweden has a bilateral tax treaty with the country in question. Here, the maximum time of deferral is five years.

The proposal covers most asset classes including stocks, receivables and partnerships in Swedish enterprises. Hence, owners of small-scale businesses and entrepreneurs will be taxed on the value of their share in the business upon leaving Sweden.

For listed assets, the tax base is equivalent to the market value at the exit date. Unlisted assets, however, are complex to value and for that reason, the tax base evaluation does not follow any standardized methods, which leads to high uncertainty regarding the potential size of the tax bill.

Assets transferred beneficially, i.e. as inheritance, to an individual with residency in another country, or who has a limited tax residence in Sweden, will be subject to the exit tax and do not qualify for any kind of deferral.<sup>1</sup>

### International mobility is increasing with taxes playing a large part

High net-worth individuals (HNWI), entrepreneurs and key employees are internationally mobile, and location choices are sensitive to tax incentives. This is not least important now, when the exit tax has not yet been implemented, as these individuals will potentially accelerate plans to emigrate since it is no longer 'safe' to stay. Furthermore, highly productive foreigners considering moving to Sweden, and Swedes living abroad, but considering returning to Sweden, might be discouraged from doing so. This should be seen in the context that these individuals contribute disproportionately to the Swedish economy.

### HNWIs are sensitive to tax incentives

The international mobility of individuals has been increasing. Especially HNWIs are becoming increasingly globally mobile and interestingly, entrepreneurs – among the group of HNWIs – are up to twice as likely to migrate.<sup>2</sup>

A key driver of this tendency has been the lower costs and potential benefits of moving abroad, due to:

- reduced psychological cost as countries are becoming more similar;
- reduced cost of adapting to a new working environment as language skills improve, production processes are becoming more homogenous and barriers to entry are eroding; and
- higher returns on personal capabilities in regions with a larger demand for or higher absorption capacity for that person's specific skills.

Taxes is an important driver of location choice, especially for the most talented individuals. Recent evidence suggests that tax incentives matter the most for highly skilled individuals within their group of peers<sup>3</sup>. This has

<sup>1</sup> See Ydstedt and Wollstad (2015) *Ten years without the Swedish Inheritance tax*, for a discussion of adverse effects of inheritance taxation.

<sup>2</sup> See Barclays (2014) *The Rise in the Global citizen*, p.3. Similar trends are observed for highly skilled immigrants in Sweden, see

Tillväxtanalys (2017) *The Global Mobility of Skilled Workers – Lessons for Sweden*.

<sup>3</sup> For example, Akcigit (2016) *Taxation and the International Mobility of Inventors*, finds that "superstar" inventors' location choices are significantly affected by top tax rates.

been shown to be the case for e.g. inventors<sup>4</sup>, football players<sup>5</sup> and scientists<sup>6</sup>.

It is generally recognized that taxes affect the ability of countries to attract highly skilled workers. For example, many European countries offer favorable tax schemes to skilled immigrants, e.g. Belgium, Denmark, Finland, the Netherlands and Romania<sup>7</sup>. While these tax schemes often involve lower income tax rates, it follows logically that the location choice is based on an overall assessment of the taxation rules of that country, and hence the exit tax might discourage highly skilled foreign labor from moving to Sweden, as discussed below. It could also be added that the proposed exit tax seems to run contrary to the efforts made to attract HNWIs to Italy.<sup>8</sup>

#### **Exit tax creates an incentive to emigrate now rather than later**

The exit tax may limit emigration of Swedes when fully implemented. This could e.g. be the case for individuals with illiquid assets that are not well diversified and where new ownership cannot easily be introduced. These individuals might not be able to meet the tax liability if they emigrate and hence decide to stay in Sweden. However, it is important to note that higher taxation will likely decrease the long-term activities for which the tax is applicable, as individuals react to the changed incentives, e.g. by investing less in highly illiquid assets etc.

However, the mere discussions regarding an exit tax create a clear incentive for speeding up potential emigration plans to avoid exit taxation.<sup>9</sup>

Consider an example where an individual with considerable unrealized capital gains (e.g. SEK 10 million) was

planning to move to Monaco in two years. Monaco has no capital gains taxation and therefore the individual would now be able to choose between two options:

1. Moving today and paying no capital gains tax in Sweden or Monaco (if e.g. the gain remains unrealized for ten years and the 10-year rule therefore does not apply); or
2. moving in 2020, when the exit tax has entered into force, and paying 30% of the gain in tax upfront or according to the proposed schedule.

In other words, the mere discussions of an exit tax create a tax incentive to emigrate for HNWIs, and such effects are not accounted for in the impact assessment.

#### **Foreigners might be discouraged from moving to Sweden**

Wealthy foreigners might be discouraged from coming to Sweden in the first place or shorten their stay if they move to Sweden.

*First of all*, wealthy and highly skilled foreigners might be more sensitive to tax incentives than Swedish citizens. This seems to be the case for e.g. superstar inventors<sup>10</sup> and may potentially be attributed to the fact that moving abroad involves some psychological cost tied to the native country.<sup>11</sup>

*Second of all*, there are clear indications that foreigners, again especially highly successful individuals, shorten their stay in response to kinks in the tax schedule. The exit tax is proposed to apply to individuals who have spent five out of the last ten years in Sweden. Hence, individuals who have spent close to five years in Sweden,

<sup>4</sup> Akcigit (2016) *Taxation and the International Mobility of Inventors*.

<sup>5</sup> Kleven et al. (2013) *Taxation and International Migration of Superstars: Evidence from the European Football Market*.

<sup>6</sup> Moretti and Wilson (2014) *Taxation, Migration, and Innovation: The Effect of Taxes on the Location of Star Scientists?*

<sup>7</sup> See Esteller et al. (2016) *Taxing high-income earners: tax avoidance and mobility*, p. 3.

<sup>8</sup> Grant Thornton (2017) *New favourable tax regime for high net worth individuals*, discussion of the Italian provisions.

<sup>9</sup> Historical evidence from the Danish wealth tax suggests that higher taxation (or expectation thereof) leads to more emigration, see Skatteministeriet (1988) *Beskatning*

*af formue*.

<sup>10</sup> Akcigit (2016) *Taxation and the International Mobility of Inventors* finds that the elasticity to the net-of-tax rate of the number of domestic superstar inventors is 0.03, while that of foreign superstar inventors is around 1, p. 1. There are also indications that entrepreneurs in general are more responsive, see Harju and Kosonen (2013) *The impact of tax incentives on the economic activity of entrepreneurs*.

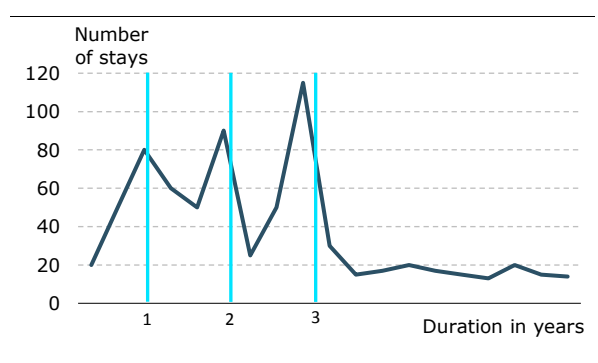
<sup>11</sup> See Esteller et al. (2016) *Taxing high-income earners: tax avoidance and mobility* for a theoretical introduction to these concepts.

will have a clear incentive to emigrate quickly to not be eligible for exit taxation.

A prominent example of the consequences of kinks in the tax schedule on the duration of stays of immigrants is the special Danish tax scheme for researchers and key employees (the so-called “forskerskatteordningen”). Seeing as, historically, the “forskerskatteordningen” has typically only lasted for three years, foreign employees rarely stay for more than three years, cf. figure 2. The figure shows that many foreign key employees leave Denmark after three years, i.e. at the end of the agreement as the scheme was organized until 2011.

The highly observed responsiveness of foreigners to tax incentives led the Danish government to extend the scheme to (currently) seven years, which is an extension from five years as the scheme was organized from 2011 to the beginning of 2018. Similar effects are likely to be observed if the exit tax is introduced. In fact, the effects are likely even more pronounced as the exit tax applies to all unrealized capital gains over a period of five years and not just future gains, which is the case for favorable income tax schemes. However, this effect is not accounted for in the impact assessment by Skatteverket, as discussed below.

**Figure 2 Length of stay of foreigners on “forskerskatteordning” in the period 1991-2006**



Note: The graph covers the period 1991-2010 and it shows the distribution for the top half percentile of incomes

Source: Kleven et al. (2013): Migration and Wage Effects of Taxing Top Earners: Evidence from the Foreigners’ Tax Scheme in Denmark

**Potential costs for the Swedish economy**

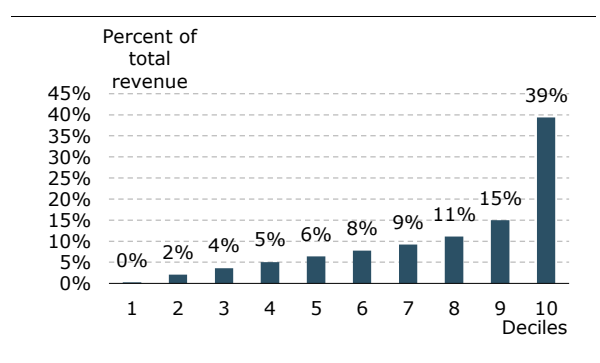
There are multiple reasons why an outflow of HNWIs and entrepreneurs today, or the lack of inflow of high net-worth foreigners, may affect the economy.

*HNWIs and entrepreneurs contribute disproportionately to overall tax revenue*

This is not just capital gains and dividend taxes, but also in terms of e.g. labor income tax, tariffs and VAT.<sup>12</sup> This pattern is also apparent in Sweden, see figure 3. For example, the top 10% of Swedish tax payers contribute 39% of total revenue. This implies that the government might be missing an important source of tax revenue.

Moreover, the top 1 percent of Swedes accounted for 13% of total tax revenue in 2015 and hence a disproportionately large share of total revenue. Furthermore, the top 1 percent of Swedish tax payers on average pay 2.7 times more in labor income tax than capital income tax.<sup>13</sup> These facts can largely be attributed to the relatively high labor income tax in Sweden in an international perspective.

**Figure 3 Percentage of total final tax by decile in Sweden, 2015**



Note: Deciles of final tax (slutlig skatt) and based on persons in the age group 20-64 years who have been registered in Sweden throughout the year.

Source: SCB

<sup>12</sup> See e.g. HMRC (2016) HMRC’s approach to collecting tax from high net worth individuals.

<sup>13</sup> These estimates are based on SCB, Tabell 9, Deciler efter slutlig skatt år samt medelvärde på inkomst och skatter 2015.

*HNWIs are often also entrepreneurs who contribute to the economy beyond their personal gains*

A significant share of the individuals likely to be affected by the proposal are entrepreneurs who serve as an integral part of value creation in the Swedish economy. Their importance goes beyond their personal gains from such activities, and radical innovation is often ascribed to these individuals and their businesses.<sup>14</sup>

*HNWIs invest disproportionately locally and hence often serve as business angels for small businesses*

This is what economists call home bias.<sup>15</sup> If HNWIs leave (or do not enter) Sweden in response to the proposed exit tax, they will most likely place a smaller share of their portfolio in Sweden going forward. While such outflow of equity capital is likely to leave large businesses unaffected, it will likely impact small and innovative start-ups that depend heavily on equity from local business angels<sup>16</sup>. Seeing as young Swedish firms already find it difficult to raise capital, this calls for additional concern.<sup>17</sup>

The reasoning behind this result is that large businesses have access to international and institutional capital markets that are not going to be affected by the proposed exit tax. However, smaller businesses that have limited or no access to formal capital markets, and therefore have to raise equity from individuals locally, will be affected as these individuals will be subject to the new exit tax.

Stated differently, the new exit tax potentially raises the effective tax level of individuals planning to emigrate, which in turn lowers their after-tax return and hence ultimately increases the required return on equity for smaller businesses depending on local investors.

### **Challenges with respect to compliance costs and interpretation of proposal**

It is generally unclear whether the proposed exit tax allows for full and immediate loss offset (meaning that negative tax payments are paid to the individual at exit).

The problem of asymmetric taxation of gains and losses is well known in the literature.<sup>18</sup> If gains are taxed at a higher (effective) rate than losses, it leads to further distortions. For example, risky investments (start-ups etc.) are effectively taxed at a higher rate than stable investments in general (e.g. large conglomerates). This asymmetry might be compounded by the proposal, increasing investment costs, in particular for start-ups and small firms.

The proposed exit tax may also pose problems for individual business owners. Examples include:

- The owner of a Swedish company who wants to take the business global. The owner has most of her wealth invested in her company and assets in the company are illiquid (e.g. machinery). Furthermore, external ownership is not easily introduced due to significant agency costs.<sup>19</sup> This implies that the owner cannot meet the tax liability due to exit tax, i.e. the value of the firm has increased faster than the wallet of the individual. Such limitations may be detrimental to growth, as taking a business global often implies that the business owner has to move physically to effectively penetrate new markets.
- The exit tax may result in personal bankruptcies. The problem with taxing *unrealized* capital gains is that the government is taxing gains that might never be realized. For example, if an individual exits Sweden in 2020 and is liable for SEK 3 million in Swedish exit tax and has her business go bankrupt shortly thereafter, she will not necessarily be able to meet the tax payment.
- Valuation of unlisted firms is potentially costly. While costs are likely to vary to a large extent across e.g. business size, portfolio diversification and funding

<sup>14</sup> See Vonortas et al. (2015) *Innovation Policy A practical introduction*, p. 15, Acs and Audretsch (2001) *Innovation in large and small firms: An empirical analysis* and Czarnitzki, Dick and Hussinger (2009) *The Contribution of Corporate Venturing to Radical Innovation*.

<sup>15</sup> See e.g. Cooper et al. (2013) *The equity home-bias puzzle: a survey*.

<sup>16</sup> See e.g. Henrekson and Sanandaji (2016) *Owner-Level Taxes and Business Activity* for a discussion.

<sup>17</sup> See Tillväxtverket (2016) *Vanligare att nya företag vill växa*.

<sup>18</sup> See e.g. OECD (2016) *Distinguishing between "normal" and "excess" returns in tax policy*, p. 12.

<sup>19</sup> See e.g. Carpenter and Petersen (2002) *Is the growth of small firms constrained by internal finance?*



structure, it is likely to be costly for business owners to have their unlisted shares valued – by Skatteverket's own estimate SEK 25,000-30,000 for a normalized company.<sup>20</sup> Especially for emigrants with moderate unrealized capital gains, such costs may have a disproportionate impact, e.g. capital gains of SEK 100,000 in one unlisted company leaves as little as SEK 40,000-45,000 after exit tax and valuation costs to the investor. For a more diversified portfolio, the problem is even more severe.

As a last point, the exit tax may have some special adverse consequences for foreigners considering moving to Sweden<sup>21</sup>. Consider an individual moving to Sweden for five years, after the exit tax has been introduced. This individual has a house in her home country valued at USD 1 million that is rented out for the 5-year period. Now assume – not uncommonly – that the house value remains USD 1 million over the 5-year period, but that the US dollar appreciates with respect to the Swedish krona by 100 units. This generates a (fictitious) capital gain of SEK 1,000,000 liable for taxation, even though the individual has not become any richer. Again, such adverse effects may limit Sweden's ability to attract highly skilled foreign labor.

### Revenue gain arguably much lower than in the government's impact assessment

A key argument for introducing an exit tax is to protect the Swedish tax base. However, the estimated SEK 1 bn in long-term revenue relies heavily on arguably questionable assumptions:

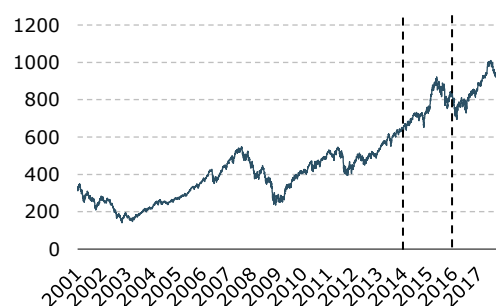
- Based on a period with returns higher than what can be expected in the long term.
- Reduced pool of high net-worth individuals will reduce not just capital income but also other taxes.
- Very few individuals account for the bulk of revenues.

### Revenue estimates are based on a period of high returns on equity

The tax estimate is based on capital gains from emigrants in the period 2014-2016. During this period, the average annual return was 10.8% on the OMX Stockholm benchmark index<sup>22</sup>, see figure 4. Compared to an average annual return of 8.3% over a 10-year period (2008-2017) and merely 6.9% in our full sample (from the beginning of 2001 to the 12<sup>th</sup> of February 2018).

Basing an estimate of future revenue on the period 2014-2016 seems even more troublesome when looking at the return of small and mid-cap indexes. During this period, the Small-cap index<sup>23</sup> rose by an astonishing 27% per year and the Mid-cap index<sup>24</sup> by 24% per year.<sup>25</sup> Such high returns can by no means be expected in the future.

**Figure 4 OMX Stockholm Benchmark Cap GI, 2001-2018**



Source: Nasdaq OMX Nordic

Fluctuations in the stock market naturally affect the capital gains of Swedes in general and of course also the unrealized capital gains of emigrants. This pattern is clearly visible from the capital gains' share of total household income, see figure 5. It is clear that the period 2014-2016 is not representative for capital gains in general. Also note that the share of emigrants subject to exit

<sup>20</sup> See Skatteverket (2017) *Exitbeskattning för fysiska personer: Beskattning av realiserade kapitalvinster som upparbetats i Sverige*, p. 176.

<sup>21</sup> This problem has been mentioned in connection with the Danish exit tax, see Deloitte (2015) *Insigt: Generel exitskat på aktiver*. We find no clear indications that the proposed exit tax in Sweden will mitigate concerns regarding currency fluctuations.

<sup>22</sup> OMX Stockholm Benchmark Cap\_GI index.

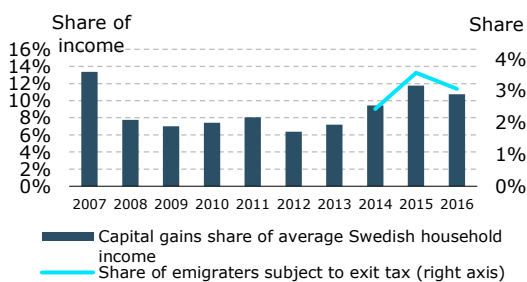
<sup>23</sup> OMX\_STOCKHOLM\_SMALL\_CAP\_GI index.

<sup>24</sup> OMX\_STOCKHOLM\_MID\_CAP\_GI index.

<sup>25</sup> Note that the returns are based on the raw indices without corrections for compositional changes.

taxation (i.e. emigrants with more than SEK 100,000 in unrealized capital gains) follows – unsurprisingly – rather neatly the share of capital gains of total income.

**Figure 5 Capital gains' share of total income, 2007-2016**



Source: SCB and Skatteverket

Our assessment is that the tax revenue estimate of the Swedish Tax Authority overestimates the actual revenue by covering a short period of high returns on equity. A rough, but conservative, estimate suggests that the long-term revenue from the proposed exit tax is overestimated by approximately SEK 160 million or 16%, see box 1 for details. The estimate is generally considered to be conservative, as it is based on the average Swedish household. However, capital gains of HNWI generally represent a larger share of total income and they therefore experience larger fluctuations over the business cycle.<sup>26</sup>

Furthermore, in the short term, the revenue will likely be much lower. First of all, the most recent prediction is that the positive output gap will start closing before 2020, which generally tends to decrease returns on capital.<sup>27</sup> Secondly, interest rates will most likely have to be normalized (increased). The Swedish Central Bank's forecast suggests that the repo rate will be increased as early as the first quarter of 2019.<sup>28</sup> Increasing interest rates make bonds relatively more favorable compared to equity and will likely put a downward pressure on stock markets.

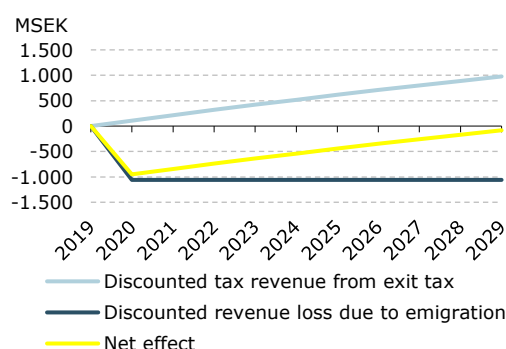
In conclusion, the short-term revenue from the proposed exit tax is therefore also likely much lower.

**People emigrating today will impact the estimated revenue**

HNWIs are globally mobile, are likely relatively sensitive to tax incentives and contribute disproportionately to overall tax revenue, cf. discussion above. This implies significant challenges in the period before the exit tax enters into force.

An illustrative example is useful here.<sup>29</sup> If it is assumed that just 12 of the 50 people who pay the most in total tax in 2015 and continue to have high recurring tax expenditures, decide to leave Sweden in 2019 in order to not be subject to exit taxation, this will significantly affect the expected revenue, see figure 6. Also note that in the counterfactual scenario with no exit taxation they would have left Sweden in 10 years.

**Figure 6 Discounted tax revenue per year from exit tax and lost revenue from 12 people leaving in 2019 (2019-2029)**



Source: PwC (2018) *Analys av förslag om utflyttningsbeskattning*, p. 5.

The example in figure 6 illustrates some key points:

- Just a few of the individuals with the highest tax payments have to leave Sweden for the proposal to generate a net loss in tax revenue for a decade.

<sup>26</sup> We have not been able to gather sufficiently granular data to quantify this effect.

<sup>27</sup> Sveriges Riksbank (2018) *Monetary Policy Report*, p. 27.

<sup>28</sup> Sveriges Riksbank (2018) *Monetary Policy Report*, p. 33.

<sup>29</sup> This example is taken from PwC (2018) *Analys av förslag om utflyttningsbeskattning*, p. 5.



- The net revenue loss is most substantial in the short term. Note that the long-term revenue is unaffected given the assumptions used in this example.
- It is exactly HNWI's who are the most likely to emigrate as a response to changes in tax policy, cf. discussion above.

While the example is oversimplified, it does not account for the fact that individuals from all high-income groups could potentially decide to emigrate in response to the proposed exit tax.

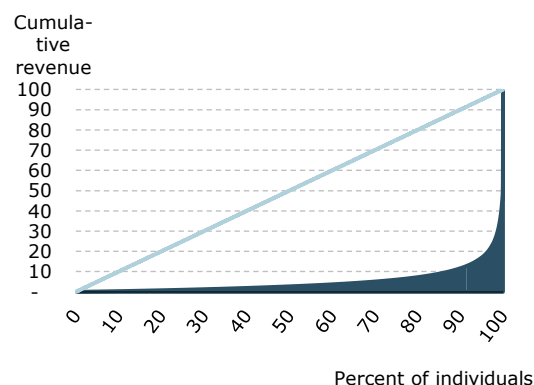
### Huge uncertainty about future revenue

The revenue from introducing the exit tax will – if the policy is implemented – most likely be fluctuating to a huge extent from year to year. This can generally be assigned to changes in the economic environment, as discussed above, but also because most of the revenue will depend upon very few individuals, see figure 7. The figure shows the cumulative revenue from emigrants ordered by their contribution to total revenue. If all individuals contributed equally, the distribution would have followed the light blue line. However, this is clearly not the case. Furthermore, the figure shows that the top 10% of individuals account for approximately 90% of the revenue. However, more interestingly, the almost vertical line around 100% suggests that only a few individuals are generating most of the revenue.

As an example, 68% of the estimated revenue in 2016 comes from five individuals who emigrated. This is equivalent to five individuals accounting for 32% of the total revenue in all three years (2014-2016).

A simple back-of-the-envelope calculation, based only on the extremely limited evidence, reveals that the unrealized capital gains eligible for exit taxation may be as little as SEK 1 bn (and as much as SEK 7 bn) within reasonable statistical uncertainty limits.<sup>30</sup> That is ignoring the fact that 2014-2016 was characterized by high returns on equity.

**Figure 7 Cumulative revenue from the proposed exit tax**



Source: Skatteverket and Copenhagen Economics

In the end, such uncertainties call for further analysis, preferably based on a larger sample covering both economic up- and downturns, and leave considerable concern regarding the effectiveness of the proposed exit tax.

<sup>30</sup> Calculated as the 95% confidence band, assuming that the estimated revenue is normally distributed.

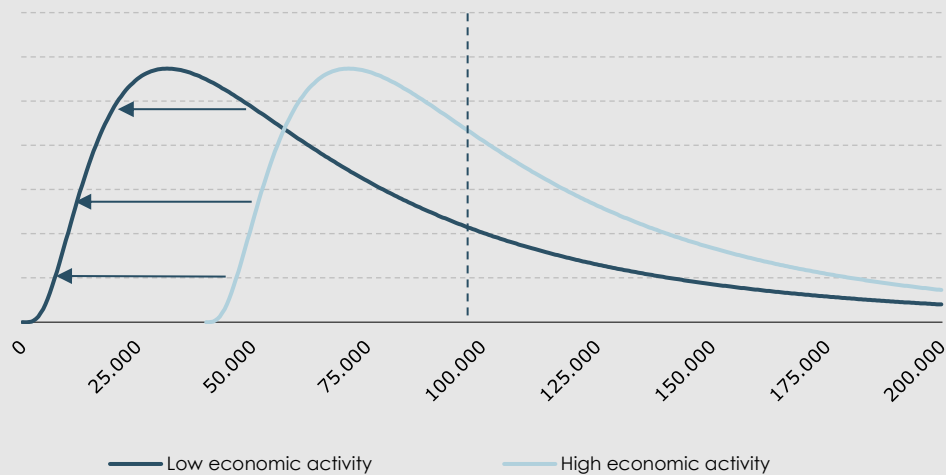
**Box 1: Accounting for historical returns in estimating revenue**

When estimating the potential tax revenue from the exit tax proposal, we use the calculations from the Swedish Tax Authority as our baseline. To correct for the effect from business cycles on potential tax revenue, we make some simplifying assumptions:

- When the economy is booming and capital gains are higher, more people are eligible for exit taxation (has capital gains in excess of SEK 100,000) and similarly capital gains are in general higher for individuals with capital gains above the threshold. This implies that the whole distribution of capital gains is shifted as a consequence of the business cycle, cf. figure 8.
- The share of capital gains of total household income perfectly correlates with the share of emigrants subject to the exit tax of total emigrants.

In estimating the effect that the business cycle has on the expected revenue, we utilize the ratio between average household capital gains from the periods 2007-2016 and 2014-2016 as proxy for the difference in revenue between a period of high returns (2014-2016) and a period of normal returns (2007-2016). This roughly suggests that the tax base – and hereby the estimated revenue – is overestimated by 16% or SEK 160 million in the long term.

**Figure 8: Illustration of shift in capital gain distribution**



Source: SCB and Copenhagen Economics













**Contact for this study:**

- Sigurd Næss-Schmidt, Partner and Director of economics
- [sns@copenhageneconomics.com](mailto:sns@copenhageneconomics.com)

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Copenhagen Economics is one of the leading economics firms in Europe. Founded in 2000, the firm currently employs more than 85 staff operating from our offices in Brussels, Copenhagen and Stockholm. Our economists provide advice and analyses in the fields of competition, regulation, international trade and impact assessment.

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- counts more than 85 employees, most with a Ph.D. or M.Sc. in Economics
- includes economists from various nationalities / languages (including Danish, Dutch, English, Finnish, French, German, Hungarian, Icelandic, Italian, Lithuanian, Norwegian, Portuguese, Spanish, Swedish), and
- operates across the world.

The Global Competition Review (GCR) lists Copenhagen Economics among the top economic consultancies in the world and has done so since 2006.

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