Analysis

# Scenarios of the Finnish economy for the years ahead

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The corona pandemic will drive the Finnish economy into recession this year along with the rest of the world. The depth of the recession is so far very difficult to assess, as it is not yet known how the corona pandemic will develop from now on, what measures will be taken to fight the pandemic and what economic policy measures will be put in place to mitigate the effects of the recession.



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It is still possible that the Finnish economy will already start to recover after the summer. This will require prompt containment of the spread of the coronavirus and measures to gradually remove the restrictions imposed. So far, the pandemic has continued to spread through Europe and Finland and the risk of long-term economic repercussions has increased. Many European countries, including Finland, report a strong increase in mortality rates attributed to the virus. However, for example Italy and Spain are already showing signs of a slowdown in mortality growth rates. In many Asian countries mortality growth rates are notably slower than in Europe.

A speedy recovery is still possible, provided that the containment measures do not remain in place

for very long and successful policies are implemented to prevent a wave of business bankruptcies and mass unemployment. Consumer and business confidence will only be restored once there are signs of containment of the spread of the virus. However, if comprehensive restriction measures must remain in place for a prolonged period, a dramatic decline in economic activity will follow. This may result in a substantial rise in bankruptcies and unemployment, with the costs of the crisis to society climbing to intolerable levels.

We are receiving more information daily on the spread of the virus, and statistics capturing the economic effects of the pandemic are gradually becoming available also from Europe. We know now that the incidence of the virus has been more widespread in Europe than it was in Asia. In addition, euro area confidence indicators suggest that the economy's jarring halt will be as strong in Europe as it was in China. This will also apply to the Finnish economy.

Previous projections showing only a minor contraction and speedy recovery of the economy were partly based on the assumption that policy intervention aimed at preventing wide-ranging bankruptcies and rising unemployment would be successful, despite the economy's jarring halt. This now appears less likely. Similarly, assessments of the global spread of the pandemic were more optimistic a few weeks ago. Overall, the risk of the pandemic causing more long-term repercussions for the economy has grown.

## Two scenarios on the economic impacts of the coronavirus pandemic

This memorandum describes two scenarios for the Finnish economy for the upcoming years. Economic developments now depend essentially on the response to the coronavirus crisis: the duration and severity of containment measures and the economy's capacity to recover once the measures have been lifted. The measures to respond to the crisis can be roughly divided into two alternative strategies. The first aims to suppress the spread of the virus as quickly as possible and mitigate its effects with light control measures. This has so far been the approach in many Asian countries. The second strategy aims to mitigate the spread of the virus so that the capacity of the health care system is not overwhelmed. Many European countries, including Finland, have so far chosen the latter strategy.

The strategies of most countries can broadly be classified as falling under one of the two approaches, even though they may consist of different elements. In reality, they often do not differ as much as assumed in calculations for the sake of illustration.

## Suppression of the virus

The cases of China and South Korea, for example, show that the virus can be suppressed by various means. As a simplification, there are two types of approaches: either very comprehensive isolation of people for weeks (lockdown), or lighter general containment measures combined with extensive testing of the population and targeted isolation measures. South Korea succeeded in stopping the spread of the virus with the latter approach, whereas China – in particular in the province of Hubei – resorted mainly to the former because the disease was already widespread.

The scenario that assesses the economic impact of a suppression strategy in Finland assumes that stopping the virus requires very strict restrictions on social gatherings and movement of people, such as those put in place in China. This is based on Finnish experts' view that Finland has so far lacked sufficient capacity for large-scale testing as carried out in South Korea, for example, and to implement a strategy based on the monitoring, tracing and isolation of cases.

The scenario assumes, however, that Finland would be able to build sufficient capacity to implement targeted isolation once the uncontrolled spread of the epidemic has been halted. Therefore, the calculation based on the suppression strategy essentially builds on the assumption that measures other than those restricting movement and gatherings of people can be developed to prevent new waves of the epidemic. In reality, this is a key challenge for the success of the suppression strategy. At this stage, Finland would only need light population-wide containment measures which would not significantly slow down economic activity. The calculation also includes the assumption that other countries' suppression strategies are also successful and that the global economy will recover without permanent output losses.

China began to lift coronavirus restrictions in late February on a region by region basis, after the epidemic was deemed to be under control. At that time, mortality rates were already very low at the national level in China – much lower than in many European countries at the moment. Following the lifting of restrictions, indicators particularly of industrial activity (e.g. energy production, manufacturing output indicators and freight volumes) begun to recover in China at the end of February. The recovery accelerated in March as the lifting of the restrictions continued. It appears, however, that China's economic activity was still significantly lower than last year even in March. In addition, the services sector has recovered at a much slower pace than the manufacturing sector.

## Mitigation of the spread of the virus

In the strategy based on mitigation of the spread of the coronavirus, containment measures are limited to slowing down the epidemic so as not to exceed healthcare capacity. Lowering the peak

of coronavirus infections (flattening the curve) postpones the peak of the epidemic. In this strategy, the epidemic spreads until its growth declines due to a sufficient increase in the number of people who have contracted the virus and are now immune to it. The Finnish Institute for Health and Welfare (THL) has estimated (25 March 2020) that the duration of the epidemic in Finland will be 4–6 months. The scenario that assesses the economic impact of the mitigation strategy assumes that containment measures must be in force for the entire six months. Since the containment measures are less stringent than under the suppression strategy, their immediate economic impact would initially also be lower.

Both scenarios assume a gradual economic recovery. However, in the mitigation-based scenario, under which containment measures need to be maintained for a longer period, Finland will not reach the pre-crisis level of output. This is because income losses from the containment measures will rise to such an extent that an increasing number of companies will face payment difficulties, and companies will also go bankrupt. Fixed-term lay-offs will become permanent and lead to redundancies over time. Unemployment will rise permanently and production capacity will remain permanently below pre-crisis levels. This calculation assumes that the level of output in 2022 will be 10% lower than in the absence of the coronavirus crisis.[1] The corresponding figure was slightly lower after the financial crisis and slightly higher after the 1990s recession.

Strategies can change over time, however. With the spread of the epidemic, many countries have had to tighten their measures relatively quickly to secure healthcare capacity. In many European countries, more stringent containment measures were introduced shortly after the mortality rate exceeded one person per million inhabitants. Some Asian countries (especially Singapore) have also tightened their measures over the past few days.

## The risk of the pandemic's long-term economic impact has grown

The risk of the pandemic having a long-term impact on the economy has grown in recent weeks. Business surveys conducted by the Confederation of Finnish Industries, the Finnish Chambers of Commerce, Service Sector Employers Palta, and Suomen Yrittäjät, an interest and service organization for small and medium-sized enterprises and their owners, reveal that the majority of Finnish firms will face considerable losses over the coronavirus situation. These losses vary by industry, with conditions in the services sector proving especially critical in places. The survey by Suomen Yrittäjät reports that 23% of firms have already fallen into financial difficulties. According to the survey by the Confederation of Finnish Industries (1 April 2020), 18% of firms believe that they risk falling into bankruptcy due to the coronavirus crisis. According to a Finnish Chambers of Commerce survey (30 March 2020), 34% of respondents estimated that their risk of bankruptcy

had increased. In a survey by Business Finland (30 March 2020), 80% of respondents estimated that the epidemic would weaken financial conditions for firms. In Finland the coronavirus pandemic and resulting containment measures have already caused severe disruptions for entire industries and the global value chains of firms (Etla, 26 March 2020). The further into the epidemic the surveys have been conducted, the more bleak has become firms' view of their chances of surviving the crisis.

The problems of firms are quickly reflected in employment, and Finland's labour market conditions have indeed deteriorated rapidly. The latest figures at the time of writing released by the Ministry of Employment and the Economy report that some 300,000 people are currently under redundancy and restructuring negotiations initiated on account of the coronavirus situation (Chart 1). The duration of the crisis will significantly affect how many of these persons will eventually be furloughed or made redundant. This outcome will also depend on the policy measures for mitigating the crisis.

## Impact of the coronavirus pandemic and its containment measures on economic activity

The pandemic is having a very far-reaching impact on the economy. In the first stage, the disruptions to supply chains caused by waves of illness and the associated deaths increase the uncertainty experienced by households and firms, resulting in a fall in consumption and investment. This decline in private domestic demand depletes firms' cash flows and creates conditions for insolvency. Firms have to furlough their staff and make redundancies, which rapidly increases unemployment. Households and the employed see their incomes fall significantly. This weakens demand even further and adds to the prevailing uncertainty.

The largest macroeconomic costs of the pandemic are, however, related to the containment measures put in place to solve the health crisis. For example, a temporary closure of economic activity by 50% for one month and 25% for two months is estimated to lower annual aggregate output by almost 10 percentage points.[2]

The OECD has assessed[3] the impact on economic activity of the containment measures put in place to combat the pandemic. The estimate is based on the output and consumption of different sectors in different countries and assumes that the internal effects for each sector are the same for all countries. According to the OECD's preliminary assessment, the immediate first-order impact of the containment measures could reduce aggregate output by 20–25% in many economies as these measures are enforced, and household consumption might decline by as much as a third. In Finland's case, the OECD's calculation puts the shortfall in total output at 22%.

Effects to this order of magnitude would easily surpass the economic turbulence caused by the global financial crisis of 2008–09. This estimate only looks at the direct impact on the output of each sector and does not consider potential second-round effects.

According to the OECD estimate, each month of stringent containment measures will lower annual GDP by two percentage points. If the lockdown is extended for three months, year-on-year GDP growth will be 4–6 percentage points lower than previously forecast.

The Bank of Finland's scenarios estimate the containment measures' impact on economic activity by looking at national accounts data on the value added and employment figures of each main industry. Statistics showing the containment measures' real-world impact on economic activity, as well the impact of the coronavirus crisis in general, remain limited at the time of writing. The assumed weekly output loss per sector caused by the containment measures relative to their normal level of output is thus based on our evaluation, as well as on statistical data available on 2 April 2020 and on survey data from Finland (including business surveys), Europe and Asia. The calculations assume that under the mitigation scenario, the immediate monthly economic impact of the containment measures would be lower than under the suppression scenario. A multiplier of two-thirds has been chosen, but in reality it might be greater or smaller.

The expected output losses can be used to roughly assess the direct impact of one month of restrictions on annual GDP growth. In scenario 1, one month of restrictions results in immediate output losses equivalent to 2.1% of annual GDP, while the direct output losses caused by one month of restrictions in scenario 2 correspond to 1.4% of annual GDP.

The key assumptions of the scenarios are summarised in Table 1.

Table 1.

**The assumptions used in scenarios***

| | Scenario 1 | Scenario 2 |
|---|---|---|
| Permanent output losses at the end of the period | 0% | 10% |
| Duration of restrictios (up to) | 15 May 2020 | 30 September 2020 |
| Persistence of temporary output losses** | 30% | 50% |

| | | |
|---|---|---|
| Weekly output losses compared to normal*** | 27% | 18% |
| Share of one month output losses in annual GDP | 2.1% | 1.4% |
| * In scenario 1, the spread of the virus is suppressed rapidly and restrictions are in force for a short period of time. In scenario 2, the spread of the virus is mitigated and the restrictions are in force for a longer period of time. | | |
| ** After the restrictions are lifted: in scenario 1, 30% of the temporary output losses per quarter are not recovered in the following quarters, while in scenario 2 the corresponding assumption is 50%. | | |
| *** Expected output losses due to restrictions compared to normal output. Based on informed consideration and on Finnish, European and Asian information and reports available on 2 April 2020. Due to delays in statistical output, access to statistical data has been limited. | | |
| Source: Bank of Finland. | | |

The impacts on annual GDP of the coronavirus pandemic and related restrictions will ultimately depend on a number of factors subject to considerable uncertainty, in Finland as elsewhere. Such factors include the extent and duration of national restrictions, the scale of decline in demand for goods and services, and the scale, allocation and timing of financial and monetary policies in Finland and elsewhere in the world. Thus, the estimates of output losses by different parties are so far largely based on informed projections, but can be specified when sector-specific economic statistics become available in spring 2020.

## Economic impact of the suppression strategy

In the suppression scenario (scenario 1), strict restrictions are expected to be in force for eight weeks from the end of March. This is roughly in line with the strict restrictions that were imposed in the Chinese province of Hubei from the end of January. In scenario 1, the economy contracts sharply as, due to the restrictions in place, weekly output declines by 15 –50% depending on the sector and even more in accommodation and food service activities (–75%) as well as in the arts, entertainment and recreation sectors (–95%). After eight weeks of lockdown, the virus is assumed to be under control and restrictions are gradually lifted.

GDP contracts sharply in scenario 1 in the second quarter (–11% from the previous quarter), but starts to grow again in the third quarter as restrictions are eased. However, the return to normal is not immediate. In this scenario, the assumption is that around 70% of the temporary output losses are recovered in the following quarters. The economy eventually returns to a normal path, i.e. in

line with the Bank of Finland forecast from December 2019, and permanent output losses are avoided. In 2020, GDP is 5% lower than in the previous year, but in 2021 growth reaches around 7% (Chart 2 and Table 2).

Chart 1.

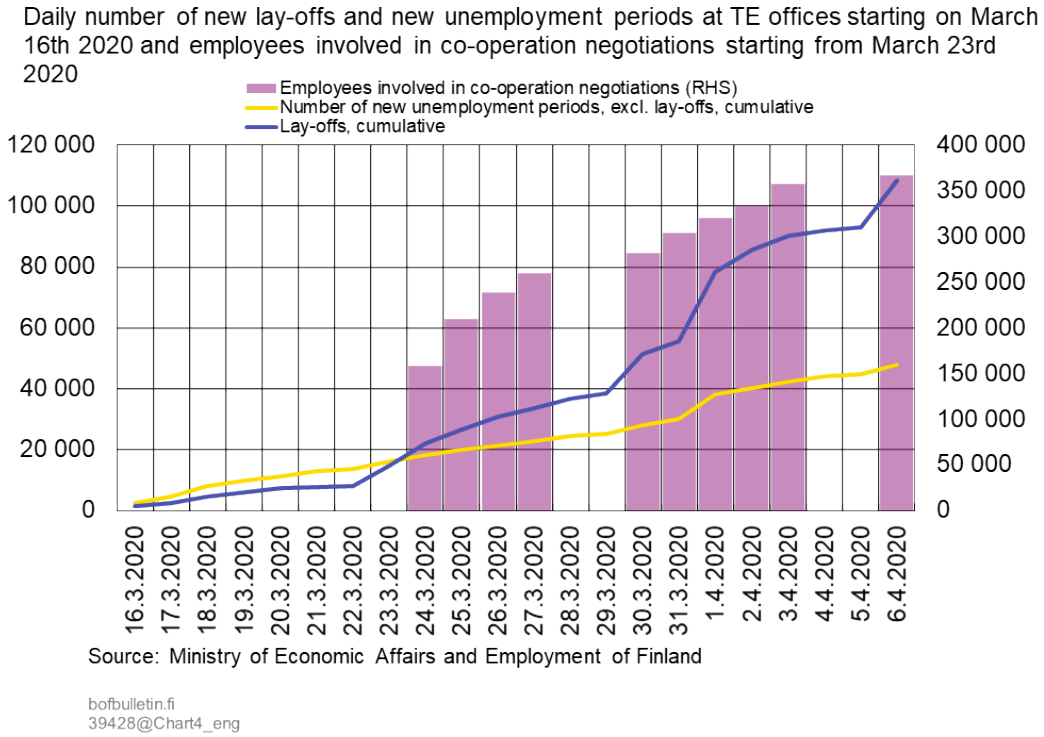



Table 2.

**The main results**

| | | 2019 | 2020[f] | 2021[f] | 2022[f] |
|---|---|---|---|---|---|
| GDP, annual growth (%) | Scenario 1 | 1.0 | −5 | 7 | 1 |
| | Scenario 2 | 1.0 | −13 | 4 | 3 |
| | Forecast, December 2019 | 1.3 | 0.9 | 1.1 | 1.3 |
| Employment rate (%) | Scenario 1 | 72.6 | 71 | 73 | 73 |
| | Scenario 2 | 72.6 | 68 | 69 | 69 |
| | Forecast, December | 72.5 | 72.7 | 73.0 | 73.4 |

| | | | | | |
|---|---|---|---|---|---|
| | 2019 | | | | |
| Unemployment rate (%) | Scenario 1 | 7.0 | 9 | 7 | 7 |
| | Scenario 2 | 7.0 | 11 | 11 | 10 |
| | Forecast, December 2019 | 6.7 | 6.7 | 6.6 | 6.4 |
| General government deficit relative to GDP (%) | Scenario 1 | −1.1 | −6 | −2 | −2 |
| | Scenario 2 | −1.1 | −10 | −7 | −6 |
| | Forecast, December 2019 | −1.0 | −1.5 | −1.5 | −1.5 |
| General government debt relative to GDP (%) | Scenario 1 | 59.4 | 69 | 66 | 67 |
| | Scenario 2 | 59.4 | 79 | 84 | 87 |
| | Forecast, December 2019 | 58.8 | 59.1 | 60.1 | 60.8 |
| Consumer price inflation (%) | Scenario 1 | 1.1 | 0.2 | 1.4 | 1.6 |
| | Scenario 2 | 1.1 | 0.0 | 0.8 | 1.6 |
| | Forecast, December 2019 | 1.2 | 1.2 | 1.4 | 1.6 |
| Scenario 1: The spread of the virus is suppressed rapidly and restrictions are in force for a short period of time. Scenario 2: The spread of the virus is mitigated and the restrictions are in force for a longer period of time. | | | | | |
| Sources: Statistics of Finland and Bank of Finland. | | | | | |
| f = forecast. | | | | | |

In scenario 1, the economy recovers from the crisis without permanent scars. Employment slows in the wake of GDP, but in this scenario, the employed are expected mainly to be able to return to their previous jobs or otherwise be re-employed once the wheels of the economy begin to turn again. The employment rate declines to 71% in 2020, but returns to around 73% in 2021 and 2022. Correspondingly, the unemployment rate rises to around 9%, but falls back to around 7% in 2021.

Also in scenario 1, the general government deficit relative to GDP deepens to around 6% in 2020

and improves to slightly below 2% in 2021–2022 as GDP recovers[4]. The general government debt-to-GDP ratio rises to just under 69% in 2020, and falls back to 66% in 2021 as GDP growth ramps up. However, the general government debt ratio remains at a much higher level unless active measures are implemented to reduce it.

The effects of the restrictions, weaker consumer demand and the simultaneous oil price war are reflected in consumer prices.[5] In the scenario based on the suppression strategy, inflation slows to 0.2% in 2020. The slowdown is driven, in particular, by a decline in energy and consumer goods prices and a slowdown in services inflation. On the other hand, food inflation is expected to accelerate. As the effects of the restrictions fade, inflation accelerates to 1.4% in 2021, and further to 1.6% in 2022.

## Economic effects of the mitigation strategy

In the mitigation scenario (scenario 2), the containment measures remain in place until the end of September 2020. The measures are less stringent than in the suppression scenario. Scenario 2 is based on the assumption that the loss of output is some two-thirds of the loss of output in scenario 1. In scenario 2, weekly output thus slows by 10–30%, depending on the sector, excl. the above-mentioned services industries that involve social gatherings and contacts and that are suffering more than other sectors.

Reflecting the high weekly cost of the containment measures, and as the restrictions remain in force throughout the second quarter, in scenario 2, the contraction in GDP in this quarter is even stronger than in scenario 1, despite the less stringent containment measures in place. GDP contracts by 15% from the previous quarter, and for the year as a whole by as much as 13%. The economy starts to grow in the fourth quarter, but recovery from the deep recession is slow (Table 2).

The contraction of economic activity is strongly reflected on the labour market. The number of people employed decreases in 2020 by some 170,000 and the employment rate falls to 68%. In the early stage of the coronavirus crisis, we have already witnessed a sharp increase in the number of people subject to redundancy and restructuring negotiations. Scenario 2 assumes that as the crisis drags on, the majority of these people become unemployed as firms encounter liquidity problems and some of them exit the market. The unemployment rate climbs to 11%, followed by only a slight decrease in 2022.

In scenario 2, the general government deficit relative to GDP deepens, to 10% in 2020, followed by a gradual strengthening to slightly below 6% in 2022. The general government debt-to-GDP ratio rises to nearly 80% in 2020 and exceeds 85% by 2022. The lower GDP growth has a strong

impact on these ratios.

Under this scenario, the negative effects on prices cumulate and in 2020, consumer prices remain at the level of 2019. Only the year-on-year rise in prices in the first quarter keeps the inflation rate at zero, as for the rest of the year, inflation is negative. Food prices rise at a higher pace than in scenario 1, reflecting the effects of the containment measures on food production and as bottlenecks become increasingly widespread. In contrast, in the case of the other commodity groups, the prolonged restrictions slow down inflation. Prolonged restrictions continue to be reflected in prices in 2021 and inflation stands at 0.8%. Inflation picks up to 1.6% in 2022, driven particularly by increases in services and energy prices.

## Conclusion

The economic effects of the coronavirus pandemic will depend on how rapidly the virus is contained and restrictions can be lifted in Finland and other countries. In light of our calculations, the suppression strategy is significantly less harmful to the economy, but implementing this strategy can be challenging. The direct costs of this strategy to the health care system are likely to be large, in order to achieve extensive testing and tracing of infected people.

On the other hand, the calculations indicate that the economic hit will be most severe if the containment measures remain in place for a prolonged period, despite the high level of uncertainty surrounding assessments of the costs of the containment measures. A prolonged crisis will considerably increase the risk of widespread corporate bankruptcies and strong growth in unemployment. These types of highly negative economic effects would weaken wellbeing significantly in the long term. For the economy, it is therefore essential to find ways to restart, as soon as possible, the services and industries that are currently subject to the lockdown, without a resurgence in the number of infected people. If containment of the virus could be accelerated and thus the lifting of the containment measures brought forward by providing more resources for the healthcare system and support activities, this would result in significant gains for the economy.

At the current juncture, the scenarios are surrounded by considerable uncertainty. The differences in the two strategies may turn out to be smaller than presented in the calculations. Many countries have introduced elements from both strategies. Finland has gradually tightened the containment measures, and in recent days the authorities have increasingly emphasised the importance of the testing and tracing of infected people. Of the Nordic countries, Norway, for example, has in the past couple of weeks moved from a strategy of mitigation to a strategy of suppression. Some Asian countries (Singapore, Hong Kong) have re-tightened their containment measures in recent days. Thus, the economic effects of the various strategies do not necessarily differ in practice as much as indicated by these calculations. The direct economic effects of the

containment measures introduced as part of the mitigation strategy may differ from the direct effects of the suppression strategy more or less than assumed in the calculation (some two-thirds of the effects of the suppression strategy).

The economic effects in the scenarios may converge if, despite the suppression strategy, new waves of the epidemic cannot be prevented, or if countries in other parts of the world are unable to contain the virus and stringent containment measures remain in place. On the other hand, economic recovery may be slow even if the authorities succeeded in stopping the epidemic, if for example economic agents continue to fear a possible deterioration of the situation and spending and investment are slowed by the uncertainty.

Thus far, the effects of the pandemic are hardly visible in the statistics on the Finnish economy available at the time of our calculations. The real effects of the pandemic will start to show only in the statistics for March and April. In the spread of the pandemic, Finland is lagging slightly behind other countries in Europe.

## Notes

1. In calculation 2, the level of output in 2022 has only returned by 90% to the Bank of Finland's baseline forecast of December 2019. ↑
2. See, for example, Gourinchas (2020), 'Flattening the pandemic and recession curves', as part of the VoxEU online publication: Mitigating the COVID Economic Crisis: Act Fast and Do Whatever It Takes. ↑
3. OECD (26 March 2020): 'Evaluating the initial impact of Covid containment measures on activity', OECD Economics Department. ↑
4. The deterioration in the general government fiscal position has been assessed in these scenarios using offset coefficients based on historical data. Fiscal balance relative to GDP, calculated in this manner, illustrates mainly the operation of automatic stabilisers. The deepening of the deficit therefore reflects the fact that, as economic activity decreases, tax revenue will decrease and unemployment expenditure will increase. The scenarios also take into account the discretionary fiscal measures announced so far, before the central government spending discussion. These measures include subsidies provided by Business Finland and the ELY Centres to companies (EUR 1.0 billion in 2020–2022), the remainder of the announced expenditure in the 2020 supplementary budget proposal (EUR 255 million) and a temporary reduction of private sector employers' occupational pension contribution (EUR –0.9 billion in 2020 and offsetting increases in 2022–2025). ↑
5. Due to the restrictions in place, data compilation on price indices will also become more difficult, especially as some services are unavailable. ↑

## Keywords

COVID-19, COVID-19, COVID-19 virus pandemic, economy, Finland, scenario