

Annual Report 2022

“Acting as a bridge between
research and society”

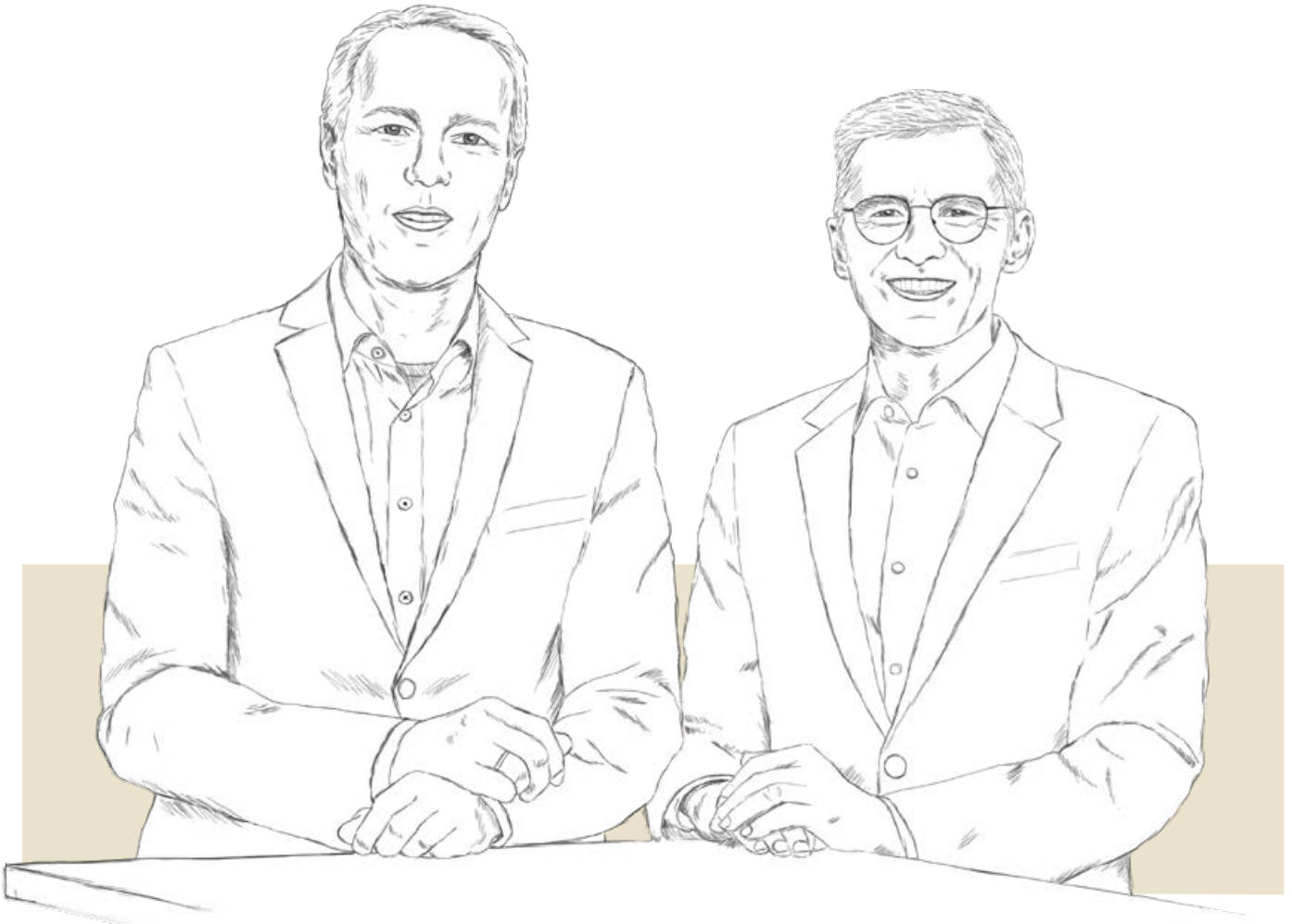
May 2023



“Business surveys and forecasting remain at the heart of KOF’s work”

The war in Ukraine and its economic fallout were among KOF’s main concerns in 2022, while the COVID-19 pandemic increasingly faded into the background. At the same time KOF underwent internal changes. KOF director Jan-Egbert Sturm and Hans Gersbach, a former member of KOF’s Executive Committee and, since 2023, KOF’s research director, explain how the institute intends to act as a bridge between research and society going forward.





Professor Jan-Egbert Sturm, KOF's director, with Professor Hans Gersbach, a member of KOF's Executive Committee and, since 2023, KOF's research director.

How do you look back on 2022 from the perspective of economic and business cycle research?

Jan-Egbert Sturm: 2022 was a year of normalisation in terms of the COVID-19 pandemic. Although coronavirus had not yet entirely disappeared, the pandemic lost its devastating impact and the economy and society learned how to deal with it. At the same time, the war in Ukraine and the sharp rise in inflation brought new economic risks to the fore. At the beginning of the year we were still of the view that inflation could well fall soon. But the outbreak of the war and the emergence of the energy crisis kept inflation elevated for longer than we had expected at the start of 2022.


Hans Gersbach: The major shocks of the last three years have posed a huge challenge for economic and business cycle research. There are two reasons for this.

First, it was no longer possible to simply extrapolate past trends, so we often had to operate with risk scenarios. What's more, during the pandemic we had to find new economic policy responses, of which we had little empirical knowledge at the time. This is because the standard

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Professor Jan-Egbert Sturm

economics textbooks don't contain a chapter on pandemics. The same applies, to a lesser extent, to the energy crisis triggered by the war in Ukraine.

Do you get the impression that public interest in macroeconomic issues has increased during the COVID-19 pandemic and while inflation is high and interest rates are rising as a result of the war in Ukraine?


Gersbach: Yes, absolutely. The recent crises have fuelled many concerns among people, such as questions like “How safe is our money?” We at KOF can provide answers to such questions. This also requires new approaches to modelling the monetary system, which has changed because central banks' reserves – including those in Switzerland – have grown significantly.

Sturm: Although prices had always been a key variable in our models, it had been decades since the issue of inflation had attracted as much publicity as it did in 2022. Inflation affects everyone – when

they go shopping just as much as when filling their cars with petrol. That is not equally true of all areas of the economy. Unemployment, for example, only affects people who are out of work at the time.

The changes taking place recently have, of course, not only been external: the institute itself has initiated internal changes. KOF has been led by two directors – in the form of you two – since the beginning of this year. How will you divide up your responsibilities going forward?

Gersbach: We will share many responsibilities in the areas of strategy, finance and human resources. As research director I will focus on refining KOF's methods and devising new research approaches. I would also like to help develop medium-term scenarios for Switzerland – including the expansion of research methods. Medium-term scenarios cover periods of two to five years (or maybe even ten) and focus on topics such as technological change and geopolitical developments.



“As research director I will focus on refining KOF's methods and devising new research approaches.”

Professor Hans Gersbach

Sturm: At present we concentrate on short-term forecasts, which generally cover the current and the coming year. If we now develop a further field of expertise in medium-term forecasting, these two areas can cross-fertilise each other. A long-term anchor – i.e. knowing in which direction our world is moving – also helps with short-term forecasting. KOF will continue to constantly enhance its core competence in business tendency surveys and economic forecasting. In future, however, we are looking to broaden our range of expertise even further with Hans Gersbach's support.

The rETHink project has set ETH Zurich on course to overhaul its organisational structure. To what extent does KOF's new organisational structure fit into this project?

Sturm: As just a small part of a large entity such as ETH, KOF is playing a pioneering role in rETHink. Our dual management team and new internal organisational structure make us one of the first units at ETH to put this project's ideas into practice. This project is intended to strengthen personal responsibility at all levels and enable members of staff to become more involved in developing ETH's organisational structure in future.



“However, our research remains closely related to its topics. We take our function as a bridge very seriously.”

Professor Jan-Egbert Sturm

Young research staff are one of the most valuable resources for research institutes such as KOF. What does KOF do to encourage and support PhD students?

Sturm: During the pandemic we launched a mentoring programme for doctoral students so that they have contact with more than just their PhD supervisor and line manager and can benefit from the research expertise and lived experience of other senior researchers. This proved to be a useful format during the pandemic so that young research staff do not feel that they are simply being abandoned with a huge mountain of research to do.

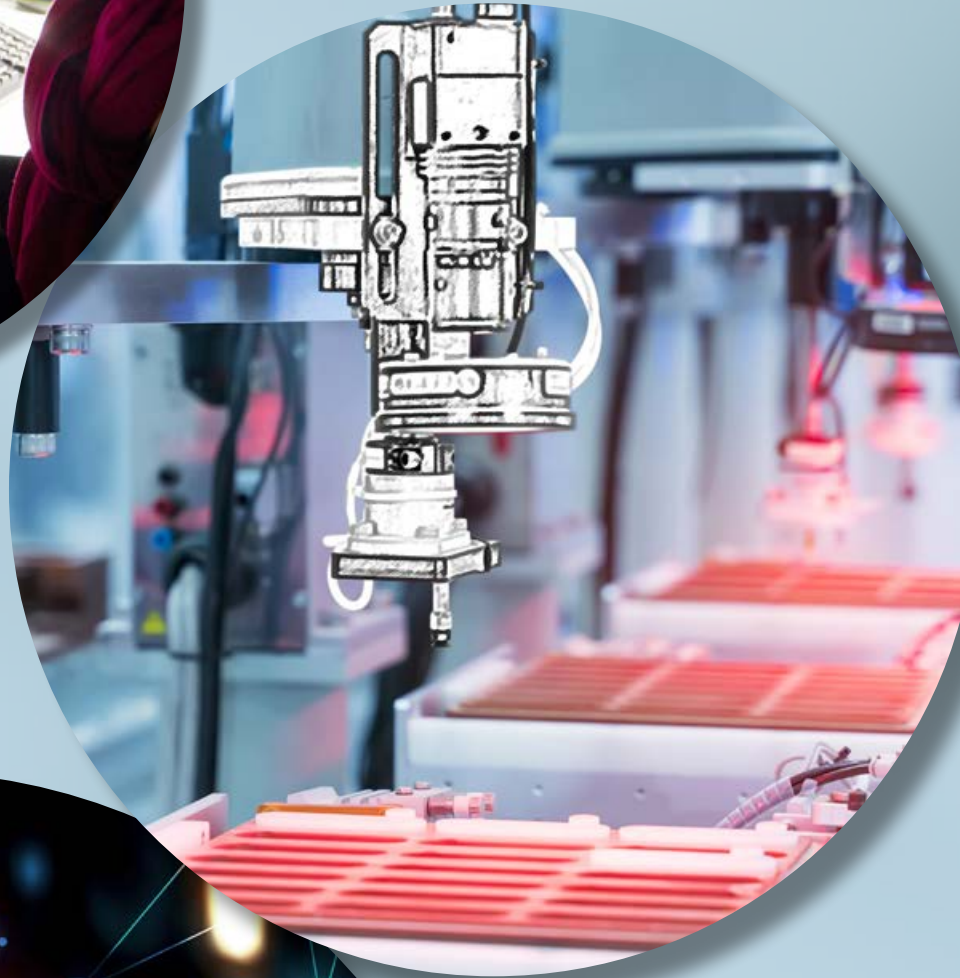
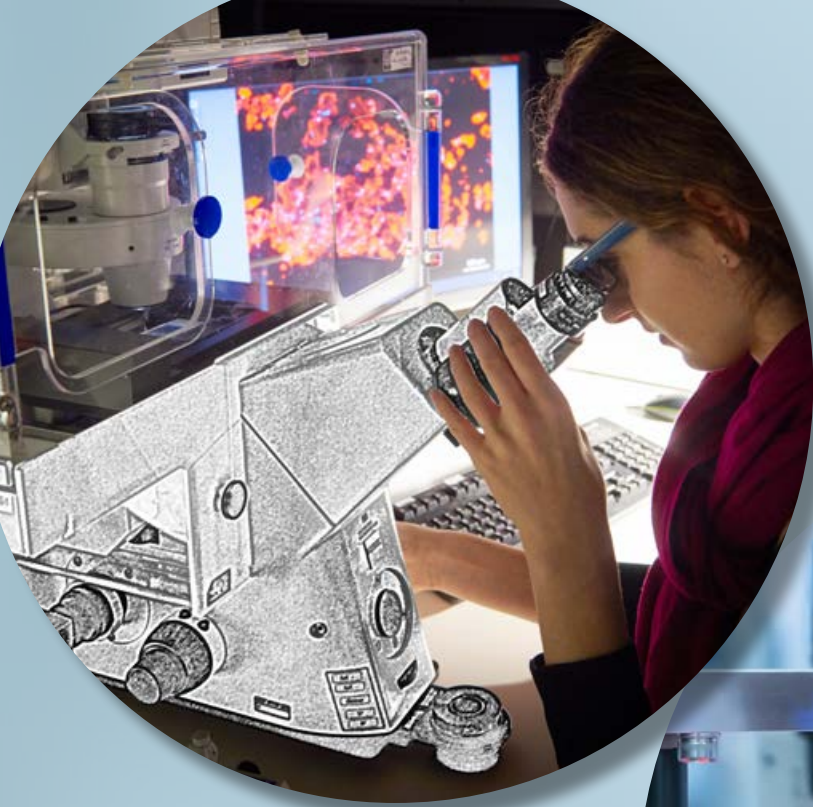
Gersbach: We are also in the process of designing a 'KOF Lab', in which PhD students and post-docs can conduct their own research projects. The aim here is to use new, often unconventional methods to devise research approaches and to launch them with the support of KOF's financial resources and third-party funding.

What does your long-term vision for KOF look like?

Sturm: Society is constantly changing and KOF is changing too. However, the institute's core function will remain the same for the foreseeable future: we act as a bridge between research and society and the economy and plan to continue to make our research findings available to practitioners. We take our function as a bridge very seriously.

Gersbach: Exactly. And forecasting and using our business surveys to monitor the economy will remain at the heart of what we do. We therefore intend to continue improving and refining our research methods.

The interview was conducted by Anne Stücker and Thomas Domjahn from KOF Corporate Communications.



Review

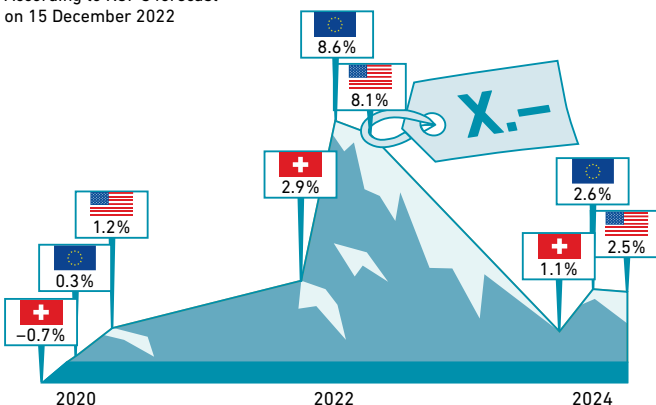
Research highlights

Focus on inflation in 2022

The research conducted by KOF relates closely to the economic policy issues affecting society. Acting as a bridge between research and society lies at the heart of the institute's mission statement and therefore forms the basis of many research projects. In addition to the war in Ukraine, the main economic topics in the public debate last year were surging inflation and the much-discussed energy crisis. As well as offering its expertise on these subjects in the media, KOF launched various projects focusing on the issue of inflation. The institute's Business Tendency Surveys, for example, included new quantitative questions on the participating firms' forecasts for wages and inflation. What is interesting here is that this provides a direct assessment of what sort of wage growth firms are expecting in their operations and what their price projections look like. These developments were supported by external individuals at the universities of Basel and Lüneburg and by the Swiss National Bank.

Chart 1: Inflation in Switzerland, the euro area and the US (2020–2024)

According to KOF's forecast on 15 December 2022



The results are made publicly available as experimental statistics. Building on this project, KOF conducted an experimental survey to answer the question of whether and, if so, how inflation expectations affect firms' price-setting and wage-setting behaviour. The findings obtained from the survey can provide general information on how price pressures spread throughout an economy.

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mentions of KOF on the subjects of **inflation and the energy crisis** on the radio & TV and in print

Shortage of skilled labour and monitoring of the labour market throughout the Swiss economy

A further frequent topic of public debate was the shortage of skilled labour. In addition to being analysed in the media, it is also the subject of research projects at KOF. Working as part of a project funded by the Swiss Employers Confederation, KOF researchers collaborated with an external partner to devise a new method of characterising the shortage of skilled workers in Switzerland in various sectors, professions and specialisms in a comprehensive and detailed way. For this purpose they used online data that showed how long virtually all jobs advertised on the internet remain available. It was the first time that this data had been used for this kind of evaluation. It enables researchers to identify job profiles that are especially difficult to recruit. The final report was published in February 2023.

Another project that examines the issue of promoting skills in science, technology, engineering and maths (STEM) addresses an early stage of the subsequent shortage of skilled labour. The aim of the cross-institutional 'Edumap' project is to promote the teaching of STEM subjects in secondary schools and to support these schools by providing them with data analysis to encourage pupils to study STEM subjects. The project is being conducted as a collaboration with the Department of Economics at the University of Zurich, the Assistant Professor of the Economics of Child and Youth Development at the University of Zurich and the Executive Boards of ETH and the University of Zurich. This involved processing data on all of the students at the University of Zurich and ETH Zurich since 2010. The project also analysed various case studies to identify what individual and school-related factors play a role in pupils' decision to study a STEM subject at one of these two universities.

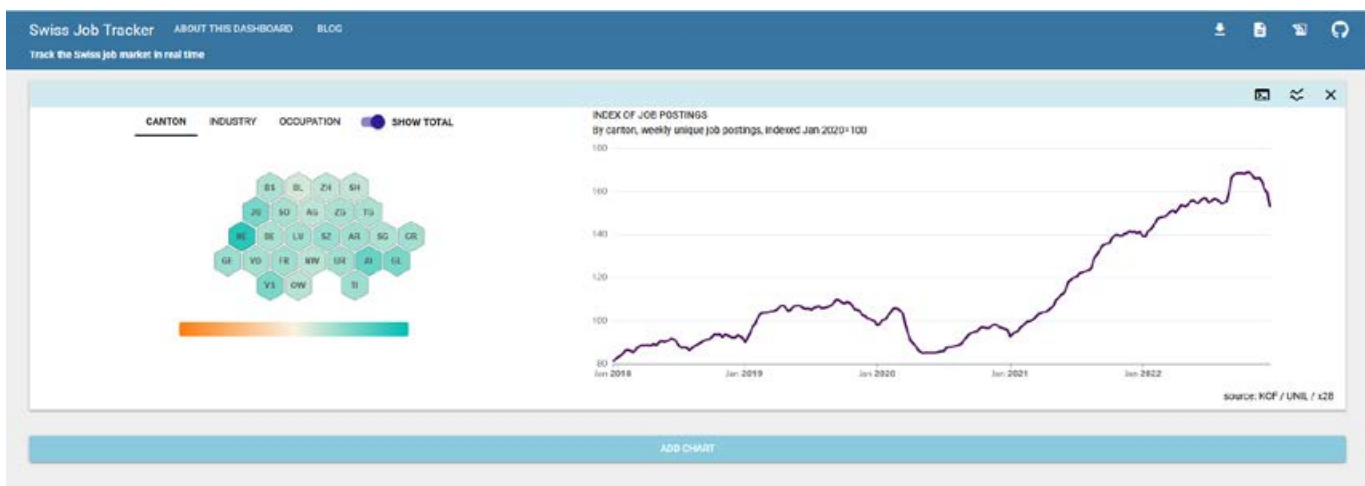
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mentions of KOF on the subjects of **labour markets and the shortage of skilled workers** on the radio & TV and in print

The relevant findings were made available to schools online at the end of 2022. This offering attracted considerable interest and, at the same time, closes a knowledge gap. As initial evaluations show, school heads have no systematic information on what subjects their school-leavers choose to study at university. KOF is conducting a project entitled 'What Workers Want:

Determinants and Implications of Job Search Strategies on an Online Job Platform' in collaboration with the Chair of Applied Economics and Econometrics at HEC Lausanne as part of the 'Digital Transformation' national research programme (NFP 77) under the auspices of the Swiss National Fund (SNF). New kinds of data from a public recruitment platform are used to investigate how unemployed individuals search for jobs online. This project aims to improve understanding of jobseekers' success factors as well as trends in the Swiss labour market and to optimise how employment offices find jobs for individuals. One of the first milestones of this project was the launch of a high-frequency Job Tracker, which monitors the number of jobs advertised online in Switzerland over time. The Swiss Job Tracker is updated once a week and therefore enables the Swiss labour market to be monitored in real time. <https://kof.ethz.ch/en/forecasts-and-indicators/indicators/swiss-job-tracker.html>.

Chart 2: Dashboard of the Swiss Job Tracker



Digital technology and innovation in the Swiss economy

A further NFP 77 project entitled 'Digital transformation: how it changes organizations, performance, and markets – a multi-level analysis', which is being conducted in cooperation with the Chair of Strategic Management and Innovation at ETH, is investigating how digital transformation impacts on the performance of firms in Switzerland and on market dynamics. The aim here is to develop a representative database and identify the implications for policymakers and strategists.

Innovation drives development and growth. That is why, for the past three decades or more, KOF has been surveying Swiss firms' level of innovation and, for some time now, the amount of digital technology that they use as well, having been

commissioned to do so by Switzerland's State Secretariat for Education, Research and Innovation (SERI). The latest innovation survey, covering the period from 2018 to 2020, was published in 2022 (see the case study on page 10 for further details).

Traditional data gathering methods such as surveys are not always appropriate for capturing new technologies in a timely and comprehensive way. The 'web-based innovation metrics' project aims to use online data to devise networking and innovation indicators in the field of artificial intelligence. These indicators enable the latest innovation activities and trends throughout the Swiss economy to be captured. The project, which is being conducted in collaboration with the University of Hohenheim and Istari.ai, is due to be completed in 2023.

Refinement of forecasting methods

Good-quality estimates and forecasts are crucial so that decision-makers from the fields of business, politics and society can make rational and well-informed decisions. What is important here is not only long-term forecasts that capture structural changes in the economy and society but also timely short-term estimates and forecasts that can identify and quantify economic turnarounds at an early stage. New methods such as mixed-frequency data models (MIDAS), artificial intelligence (AI) approaches and dynamic factor models now enable large quantities of data to be analysed virtually in real time so that short-term movements within key economic data can be identi-

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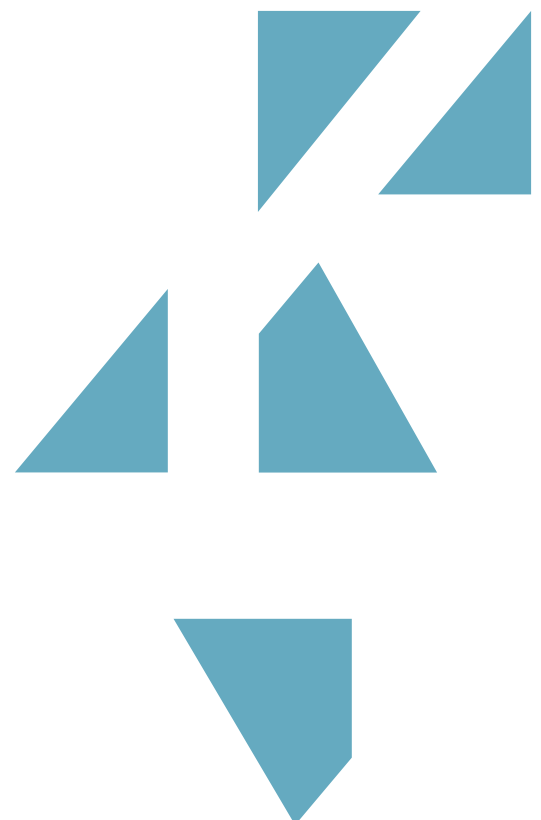
mentions of KOF on the subjects of
**economic forecasting and Swiss
economic growth on the radio &
TV and in print**

fied. This was very much evident during the COVID-19 pandemic, when the economic and financial situation was changing almost daily, if not by the hour initially. By using various methods, it is possible to combine model forecasts in order to improve forecasting accuracy. Various projects at KOF aim to use exactly these new methods to develop new models for short- and longer-term forecasts.

One of these projects is KOF's Nowcasting Lab, which is a real-time testing platform for forecasting current-quarter GDP by using previously available and higher-frequency data. These models are updated daily for a number of countries based on large quantities of data and are published online. KOF's Nowcasting Lab started its second year successfully in 2022, acquiring the Directorate-General for Economic and Financial Affairs (DG ECFIN) of the European Commission as a collaboration partner. In addition, further countries were integrated into the Nowcasting Lab. Portugal was included in the forecasts on behalf of the Portuguese finance ministry. Bulgaria, Romania and the United States were also added. <https://nowcastinglab.org/map>.

When forecasting the Swiss economy, KOF usually used its 'macro-model', which was completely overhauled and converted into a Bayesian estimation method, for which a new type of numerical procedure was devised. This approach helps to provide a better and more intuitive assessment of the uncertainty inherent in any forecast. The new 'KOF KoMa' forecasting model is due to be used for the first time in 2023. There are also plans to make the new model's Bayesian estimation method publicly available.

A team is developing financial forecasting models over various time horizons for and in collaboration with Switzerland's Federal Finance Administration (FFA). The 'Fiscal Nowcasting' project is devising ways of providing financial statistics data on a quarterly basis. Such data has traditionally only appeared once a year. However, the recent economic crises in particular have increased the need for quarterly data. The 'Macroeconomic Fiscal Forecasting' project is designed to produce short- and medium-term forecasts of the key aggregates of public budget data, which are consistent with the development of macroeconomic indicators. This approach is based on the Bayesian vector autoregressions (BVARs) being developed at the institute. The aim of this sub-project is to supplement KOF's models with additional fiscal variables that are relevant to fiscal policy and the production of government financial statistics. ■





Innovation survey: consistency is good for the economy

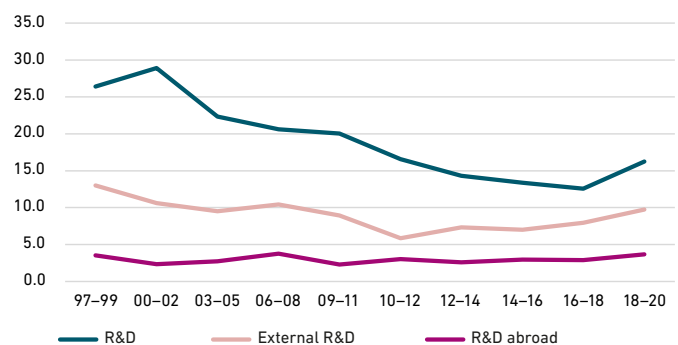
Switzerland is the land of innovation – that is widely known. But did you know that KOF is the only institution that systematically collects data on innovation in the Swiss economy?

International innovation rankings of various countries invariably show Switzerland near, or even at, the top of the list. The ability to innovate has a positive impact on a country's prosperity. In addition, firms in Switzerland are constantly able to bring new or better products to market and to remain competitive. This often happens in collaboration with the research institutions in this country. Companies require the right conditions to encourage them to invest in research and development (R&D). But how do we know whether a policy measure is effective or not? This is where KOF is involved. It systematically surveys Swiss firms' innovation activities on a two-year cycle. This monitoring enables KOF to track long-term structural changes in the innovation landscape as well as economic shocks such as the financial crisis of 2009 and international political events such as exclusion from the EU's Horizon 2020 funding programme. It also provides facts in order to introduce policy measures, measure their impact and identify where firms are experiencing problems. Such monitoring reveals, for example, why companies invest less in R&D.

More firms investing in R&D now

That is exactly what has happened since the beginning of this century. The proportion of firms conducting R&D in Switzerland fell continuously right up until the latest survey, which covered

Chart 3: Proportion of firms investing in R&D throughout the country



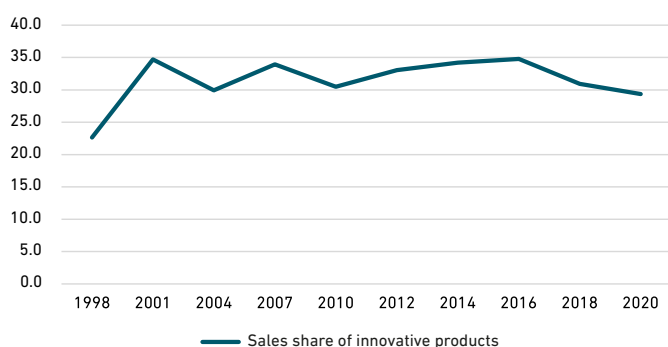
Base: All firms with more than 5 employees.

the period from 2018 to 2020 and heralded a turnaround. More firms are now investing in R&D again, and their increase from 12.6 per cent to 16.3 per cent is considerable on a historical comparison (chart 3). At the same time, however, we can see that there has been a rise in revenue as a share of R&D spending over the entire period (chart 4). This means that although R&D activity has grown significantly, it is concentrated among fewer firms. An international comparison reveals a similar picture for Germany but a different one for the Netherlands. Has this had



new sectors and new technologies as well as questions on R&D collaborations and funding. New blocks of questions were also often introduced to examine recent landmark events. The survey conducted in 2013 asked firms about the fallout from the global financial crisis, while in 2020 and 2021 it investigated the economic impact of the COVID-19 pandemic. The initial impetus for the survey came from a project financed by the Swiss National Fund (SNF). Subsequently the survey was always conducted on behalf of federal institutions: first for the Federal Office for Economic Affairs, then for the Federal Office for Economic Development and Labour and, subsequently, for the State Secretariat for Economic Affairs (SECO). KOF currently conducts its innovation survey on behalf of the State Secretariat for Education, Research and Innovation (SERI). This collaboration enables the innovation survey to form the basis for the official statistics of the Swiss private sector's innovation activities. As this data gathering is internationally harmonised, i.e. identical and aligned, KOF supplies its Swiss data to international organisations such as Eurostat, the OECD and UN organisations.

Chart 4: Revenue from innovation as a share of the total economy



Base: Innovative companies in Switzerland.

an impact on the average innovation performance of innovative Swiss companies? Clearly not. Average revenue from innovative products as a share of total revenue has remained fairly constant over time (chart 4). This means that innovations 'made in Switzerland' continue to be commercially quite successful and Swiss firms remain internationally competitive.

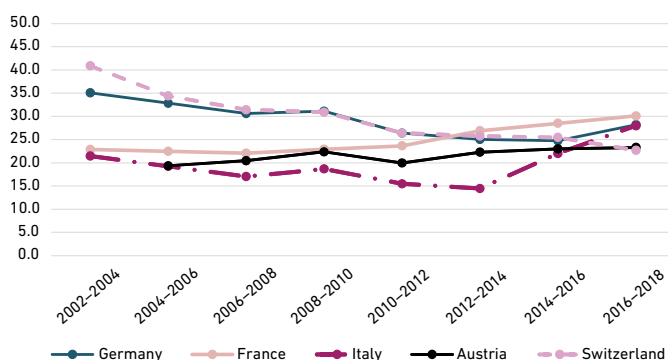
Even its surveys are innovative

All of these observations and conclusions are only possible because KOF has been monitoring firms' innovation activities for some time now – since 1990, to be precise. Switzerland is therefore innovative not only in terms of its products and services but also in the ways in which it surveys them. KOF conducted its first ever innovation survey in the autumn of 1990 – even before the European Union. Firms were initially surveyed every three years and then, from 2011, every two years. And the surveys themselves were continually refined: KOF added

Continuity is essential

The next innovation survey is being conducted in the spring of 2023. Temporal comparisons and international comparability are crucial here too. Continuity of the questions asked is therefore a major priority. Nonetheless, there is scope for additional questions on currently relevant topics. The difficulties arising from the EU framework agreement also affect Switzerland's innovation and research landscape. A special block of questions will ask what the consequences of Switzerland's Horizon Europe status will be. This situation poses new challenges for Switzerland's system of innovation funding. We therefore ask what funding options Swiss firms are utilising. In addition, companies' current digital transformation is taking place against the backdrop of artificial intelligence. This is impacting on their innovation activities. The next innovation survey will also examine the extent to which Swiss firms exploit this potential and what type of company will play a pivotal role here. ■

Chart 5: International comparison of R&D activities



Source: EUROSTAT/KOF

Third-party funded projects

Acquiring third-party funding is especially important for research projects. KOF's basic funding is provided by ETH Zurich and the Swiss Society for Economic Research (SGK). The implementation of large research projects in particular, however, relies on the availability of third-party funding.

The third-party funded projects acquired in 2022 included a project entitled 'Monitoring Ethnic and Immigrant Discrimination in Hiring Decisions in Times of Crisis' as part of the 'On the Move' projects run by the National Centres of Competence in Research (NCCRs). This project is being conducted in

collaboration with the Immigration Policy Lab at ETH Zurich. A project entitled 'A New Swiss Firm Survey Panel: Swiss Franc Shocks and Climate Policy' was supported by ETH's MTEC Foundation. In addition to these third-party funded projects, KOF produced studies and expert reports for federal institutions such as the State Secretariat for Education, Research and Innovation (SERI), which analysed the R&D activities of firms in Switzerland, as well as a feasibility study for the Federal Department of Foreign Affairs (FDFA) in collaboration with the Federal Statistical Office (FSO). ■

Publications



The publication of papers – especially in peer-reviewed journals – is an indicator of the quality of academic research. A paper published by Michael König and his co-authors in the leading journal *Econometrica*, for example, examined the question 'From Imitation to Innovation: Where is All That Chinese R&D Going?'. This paper's authors construct and estimate a total-factor productivity growth model that is driven by innovation and technology diffusion through random interactions. This model is designed to gain new insights into the nature and impact of the boom in research & development (R&D) spending in China in recent years. Despite the numerous distortions highlighted in previously published studies, this R&D investment appears to have significantly contributed to productivity growth in China. Nonetheless, the productivity returns to R&D investment in China are lower than those in Taiwan. Moreover, the widespread production wedges often encourage the wrong firms to invest in R&D, which reduces the productivity of R&D spending. A further key finding is that the misallocation of

In 2022 the researchers at KOF continued to publish their empirical research in academic journals and other prestigious working papers series. KOF's series of working papers achieved a minor milestone last year with the publication of its 500th paper.



investment has significant dynamic effects. To the extent that large companies have stronger incentives to invest in R&D, the misallocation of resources distorts firms' natural comparative advantage in managing the innovation process, and so it ultimately slows economic growth. <https://doi.org/10.3982/ECTA18586>.

A further paper entitled 'The Pass-Through of Minimum Wages into U.S. Retail Prices: Evidence from Supermarket Scanner Data', which appeared in *The Review of Economics and Statistics*, examines how increases in minimum wages feed through into the prices charged by supermarkets in the United States. Michael Siegenthaler and his co-authors base their analysis on high-frequency scanner data and use a large number of rises in minimum wages at state level between 2001 and 2012. Their analysis shows that a 10 per cent increase in the minimum wage leads to a rise of 0.36 per cent in food prices. This amount is

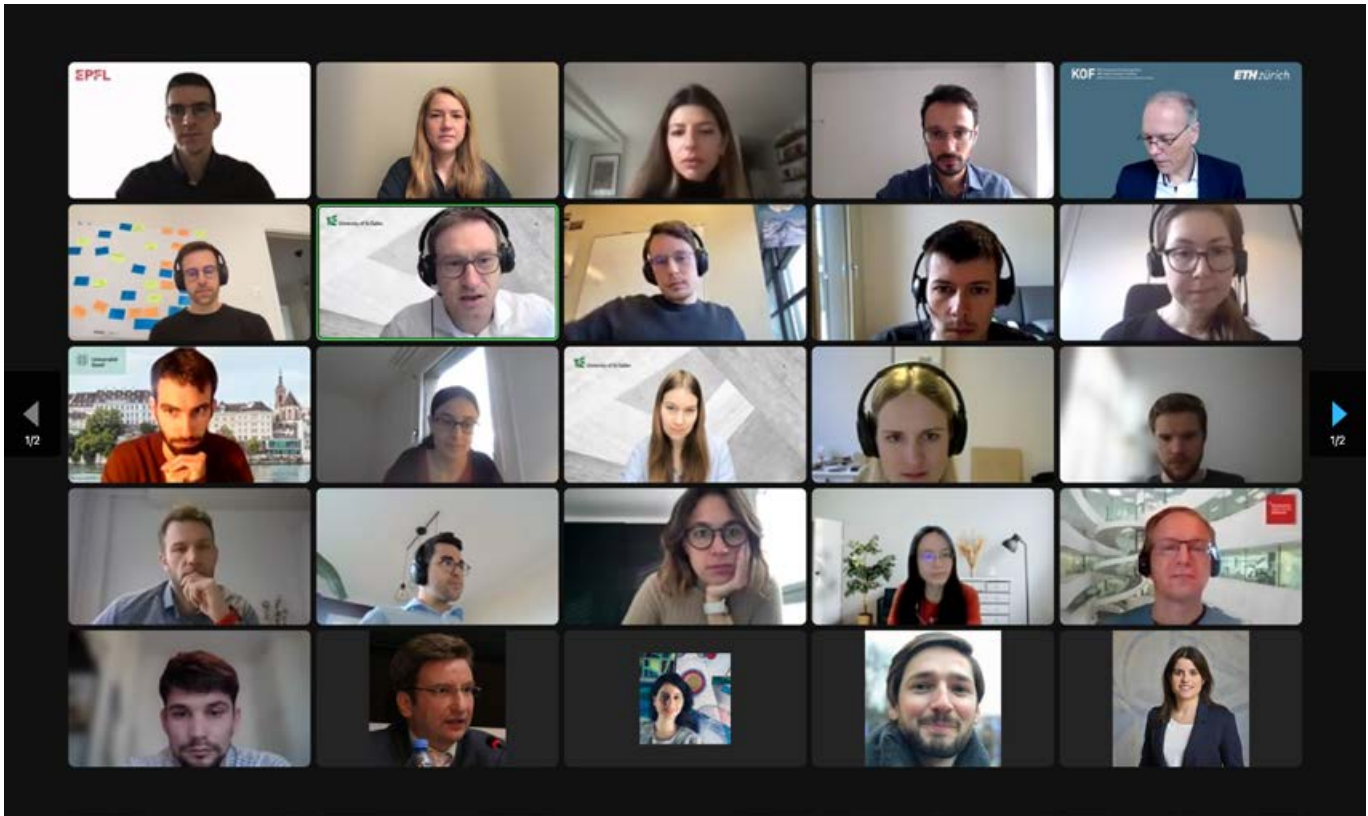
consistent with such cost increases being fully passed on to consumer prices. The authors also show that price adjustments usually take place during the three months after the relevant minimum-wage legislation has been passed rather than after it has already been implemented. This suggests that food price formation is forward-looking. https://doi.org/10.1162/rest_a_00981.

Further evidence of the quality of research is its acceptance at academic conferences. Many conferences were resumed after the years of the COVID-19 pandemic. KOF researchers gave a total of 44 presentations at academic conferences. ■

Image on left-hand page: alperdostal / stock.adobe.com, KOF, https://online.library.wiley.com/doi/10.1111/j.1468-0262.2022.19014



Supporting young research staff



Attendees at the Young Swiss Economists Meeting in 2022.

The training of young research staff forms a key component of what KOF does and covers more than just academic aspects. The mentoring programme for its PhD students introduced in 2021 became firmly established in 2022. This programme is designed to help doctoral students to meet the challenges of studying for a PhD. They are advised and supported in this process by senior researchers at KOF. However, these mentors also assist them with any questions or concerns that lie outside the field of their research. The programme helps to build

a relationship of trust between a doctoral student and an experienced researcher, who is neither a PhD supervisor nor a line manager.

In addition to this programme, the various seminar series regularly held at KOF last year provided the 13.6 (in full-time equivalent terms) PhD students and three post-docs with the opportunity to present their work and familiarise themselves with external researchers' projects, thereby refining their own methods and learning about other fields of research within

economics. In addition, a number of conferences and workshops offered the chance to present and discuss research. A workshop entitled 'Job Search and the Labour Market' was organised in collaboration with other Swiss universities and enabled a few of KOF's PhD students to present their work to some of the world's leading experts. KOF once again organised the Young Swiss Economists Meeting of the Swiss Society of Economics and Statistics in 2022 in order to promote dialogue between young economics researchers in Switzerland. ■

Prizes and awards



Two working papers written by KOF researchers received awards last year. Pascal Seiler won the Isaac Kerstenetzky Young Economist Award at the 36th CIRET Conference in Istanbul for his paper entitled 'Surprises in Prices: Firms' Price Expectations and Changes in Their Price Plans'.

Johannes Dahlke, Mathias Beck, Martin Wörter and their co-authors won the Best Paper Award for their research paper entitled 'When is AI adoption contagious? Epidemic effects and relational embeddedness in the inter-firm diffusion of artificial intelligence' at the prestigious R&D Management Conference in 2022. A further paper entitled 'Productivity effects of IT investments and the role of innovation and competition' by Mathias Beck, Martin Wörter and their ETH co-authors was nominated as best paper at this conference. Last year also saw Mathias Beck win a further award as best reviewer of the *Industry and Innovation* journal.

In addition, Philipp Baumann won first prize at the CITADEL Global PhD Datathon in the United States. These competitions involve analysing large and complex datasets and then presenting them to a jury. The winners receive a five-figure sum as prize money.

Isabel Martínez was officially recognised by the Europe Forum in Lucerne last year for her highly influential research into inequality and its impact on the economy and the media.



Isabel Martínez.

Michael König.

Martin Wörter.



Johannes Dahlke and Mathias Beck.

In addition to these awards there were also three appointments last year. Michael König became a Research Fellow at the Centre for Economic Policy Research (CEPR), Isabel Martínez was confirmed as a Research Affiliate at CESifo and Martin Wörter was appointed as a Research Associate at ZEW Mannheim. ■

Committees

Some KOF employees sit on various committees and boards or perform official functions both in and outside Switzerland, where they are able to contribute their economic expertise. Isabel Martínez, for example, is a member of the Swiss Competition Commission, KOF director Jan-Egbert Sturm is, among other things, a member of the COVID-19 scientific advisory body, and Michael Graff is a member of the decommissioning fund for nuclear facilities and the disposal fund for nuclear power plants (STENFO) (the annex to this annual report contains a comprehensive list).

STENFO's basic mission is to secure funding for the decommissioning and disposal costs incurred by nuclear power plants in Switzerland. The two funds are allocated to the Federal Department of the Environment, Transport, Energy and Communications (DETEC). Michael Graff, head of the Macroeconomic Forecasting research division, is a member of the Cost Committee, which prepares the basis on which the Administration Commission makes its decisions. In particular it reviews cost studies and submits requests for the likely amount of the decommissioning and disposal costs

to be fixed. Acting within this committee, the 'general safety margin' working group, which is chaired by Michael Graff, has appointed three external experts for the 2021 cost study and has evaluated their recommendations for a tolerance level of no more than 20 per cent in the currently six written expert reports and, on this basis, has opted for the central figure as a margin on top of the basic costs and recommended this amount to the Administration Commission. ■

Visiting researchers

Academic research relies on the international exchange of ideas. A small institute such as KOF can only conduct many of its research projects because they are run as collaborations with other researchers both in Switzerland and abroad. In addition to KOF employees visiting other institutes to work on projects or conduct research, KOF frequently welcomes visiting researchers as guests for these purposes. Two visiting researchers worked in the Swiss Labour Market section: Sophie Cottet from the Paris School of

Economics was at KOF until the summer, while Jeremias Klæui from Université de Lausanne visited in the spring. KOF hosted Professor Dr Constantin Bürgi from University College Dublin in its International Forecasts section in the autumn. Pascal Seiler, a PhD student at KOF, had the opportunity to deepen his research at the European Central Bank (ECB) in Frankfurt. At KOF he works on the institute's Business Tendency Surveys. ■

Events

2022 saw a return to in-person events

At last! KOF was finally able to resume its in-person events in 2022. The networking prevented for so long by the pandemic was re-introduced, and people made full use of this offer. The first Wirtschaftsforum held on 4 July 2022 under the heading 'Energy crisis: what is the way out?' attracted many interested people, who used the aperitif afterwards as an opportunity to chat with like-minded individuals. The subject matter of the further Wirtschaftsforen held on 8 September ('How can the Swiss pension system remain viable in the long term?') and on 25 November ('Digital transformation and new technology: how innovative is Switzerland?') also generated considerable interest.

Spring 2022 saw KOF being hosted again in western Switzerland at a joint event with the Vaud Chamber of Industry and Commerce (CVCI), where it shared its expertise on the topic being discussed ('Au sortir de la crise, quelle est la situation du secteur de l'immobilier ? Quelles sont les nouvelles tendances et les perspectives concernant l'immobilier commercial?').

KOF addressed the latest issues at its international virtual 'Beyond the Borders' events, which discussed subjects such as 'Is it all over for Switzerland as a tax haven?' and 'COVID-19 pandemic, war in Ukraine, and energy crisis: a crucial test for relations between France, Germany and Switzerland?'.

The annual forecasting conference represented a highlight and a major step towards organisational normality. KOF welcomed more than 120 interested individuals from the fields of business, politics and academia to the Careum Auditorium



in Zurich on 5 October. The topic being discussed was where the Swiss economy was heading after the reversal of monetary policy. Those taking part in the debate were Dr Alexandra Janssen, CEO of ECOFIN Portfolio Solutions AG, Dr Andréa Maechler, member of the SNB's Governing Board, Professor Dr Rudolf Minsch, Deputy Chair of the Executive Board, Head of General Economic Policy & Education and Chief Economist at economiesuisse, and Professor Dr Jan-Egbert Sturm, KOF director, ETH Zurich. This interesting event was moderated by Reto Lipp.

In conclusion we can say that KOF looks back on a year full of in-person events, fascinating panel debates on topical issues, highly respected and engaging experts, attentive audiences and, last but not least, lively discussions during the networking aperitifs. ■

Forecasting conference 2022.





Our institute

An important issue for Switzerland – as a small, open economy – is the performance of its labour market. This topic has attracted considerable interest in recent years, and researchers at KOF have published numerous studies on this subject. Consequently, the Swiss Labour Market research division was set up on 1 January 2022 and is headed by Michael Siegenthaler. Working and researching alongside him in this field are a post-doc, two PhD students and a pre-doc.

The work conducted by the Swiss Labour Market research division focuses on analysing factors that affect firms' demand for workers, on immigration policies, unemployment, and the impact and functioning of digital labour markets. Particular attention is given to the reasons for, and the effects of, labour market discrimination – especially gender-related disparities in employment, pay and education – and discrimination of ethnic minorities. This research division highlights employment, unemployment and remuneration trends in Switzerland as part of KOF's economic forecasts. It is also responsible for the KOF Employment

Indicator, which – based on the institute's Business Tendency Surveys – provides an early quarterly assessment of the labour market situation over the coming months.

Mission statement
KOF is a forward-looking research institute that analyses economic developments relevant to Switzerland. It has its finger on the pulse of the economy, addresses issues of economic and socio-political importance, draws on its research expertise to devise and present politically independent solutions, and encourages the exchange of ideas among economists and a broader public. This bridging function is consistent with its national mission of monitoring, analysing and forecasting the Swiss economy.



Michael Siegenthaler.

We continued to follow this mission statement rigorously in 2022. We built bridges between research and society by providing assessment and analysis in our monthly KOF Bulletin, offering events for a non-specialist public and issuing our publications. Given the war in Ukraine, the energy crisis, surging inflation and the shortage of skilled labour, however, our employees were much in demand as commentators in the media. They offered their research expertise in more than 700 newspaper articles, television appearances and radio interviews. This was slightly more media exposure than in the previous year. ■



The words most frequently mentioned by the Swiss media in connection with KOF in 2022 (automatically generated word cloud).

A behind-the-scenes look at KOF

Who are the people behind the forecasts, studies, indicators and surveys? Three KOF employees lift the lid on their activities at the institute.

Yngve, you have been working at KOF since 1996. What external shock posed the greatest challenge to you as a forecaster?

Two separate events stand out particularly in my memory. The first one was the start of the financial crisis, which culminated in the insolvency of the US investment bank Lehman Brothers while we were producing our forecasts in the autumn of 2008. The second one was the worldwide spread of the SARS-CoV-2 virus at the beginning of 2020, which led to the COVID-19 pandemic. In both cases we had to identify the causal chains and use them to produce plausible forecasts. Although we continued to apply our forecasting models, we had to do so with more caveats during the pandemic than we had done during the financial crisis.



Yngve Abrahamsen.

You are now about to hand over to your successor Alexander Rathke. What advice would you give him?

The most important thing is to encourage collaboration with everyone involved in forecasting and to make the best

possible use of each individual's expertise. One of KOF's strengths is its pleasant working atmosphere and its focus on using its existing resources as efficiently as possible. This applies both to its academic work and to its publicity-related activities.

And, finally, we would like you to summarise your time at KOF and are wondering whether we might continue to see you in our offices occasionally?

It has been a very pleasant and instructive time. I have made many friends here and have enjoyed the variety of my work. As long as my colleagues are at KOF, I will no doubt be visiting them now and again.

Kristina, how did your job at KOF begin?

I started working at KOF in April 2022. In my very first week in the job, I and others from the Labour Market section visited the 'Gender' exhibition in the *Stapferhaus* in Lenzburg. That was an excellent way of getting to know the team while discussing gender inequality – a subject that will play an important part in my dissertation. I also really enjoy talking to the many PhD students and other researchers at KOF, whether in the staff canteen or at seminars and brown-bag lunches.

What was your highlight of 2022?

One of my highlights was attending the two-day 'Job Search and the Labour Market' workshop, which was partly organised by KOF, in June 2022. This enabled me to gain a good insight into

the latest research in this field and to meet other researchers. However, it was also interesting to see how such an event is run, how other researchers present their projects and to chat to doctoral students who are researching similar topics to mine.

What plans do you have for the new year with regard to your PhD? Where do you see the main challenges?

The next step for me is that I have to submit the plan for my doctorate at the end of March. Then I'm looking forward to getting properly started on my first research project. I'm working with Michael Siegenthaler and Daniel Kopp from KOF and with Dominik Hangartner from ETH's Immigration Policy Lab to investigate whether firms that prefer to employ men pay higher wages than



Kristina Schüpbach.

firms that prefer women. One challenge for me will be to remain well-organised and, especially, to stay focused despite the many different datasets and fascinating questions.

Nina, you work on the Consensus Forecast. This is a survey of experts who submit their expectations for the Swiss economy. Why was it so important to expand this forecast? What are the institute's plans for the Consensus Forecast?

There are many reasons why we expanded the panel of participants in KOF's Consensus Forecasts. The firms and organisations participating in these forecasts are now not all based in Switzerland and include forecasters resident abroad. The panel is therefore more diverse, which is likely to improve the accuracy and predictive power of the KOF Consensus Forecast. Survey respondents abroad may have a different view of the Swiss economy. Moreover, it is generally desirable to have a larger number of participants so that a broad-based and robust Consensus Forecast can be calculated. For the future we are considering systematically evaluating every survey participant's response to the KOF Consensus Forecast according to their forecasting errors so that the best forecasters receive an accolade.

What was your highlight of 2022?

2022 was generally a very interesting year for economic researchers. At the beginning of the year, for example, when the SARS-CoV-2 variant Omicron

was spreading rapidly, within just a short space of time in January 2022, KOF supplemented its Business Tendency Surveys with additional questions on the extent of staff absences and the revenues lost as a result of these. The responses were evaluated once a week, which enabled the current situation to be monitored on a very timely basis. The results showed that the greatest impact was identified around the middle of February. An average of 10 per cent of workers were self-isolating or quarantining. These absences reduced revenues by an average of 2 per cent. The production of economic forecasts was also very interesting and instructive in 2022. I am responsible for private consumption and was faced with a number of extraordinary and challenging questions. These included the question of the extent to which consumers in Switzerland would spend the savings that they had accumulated during the pandemic, or how Swiss households would react to surging prices and the impending energy crisis.

What will be your main projects in 2023?

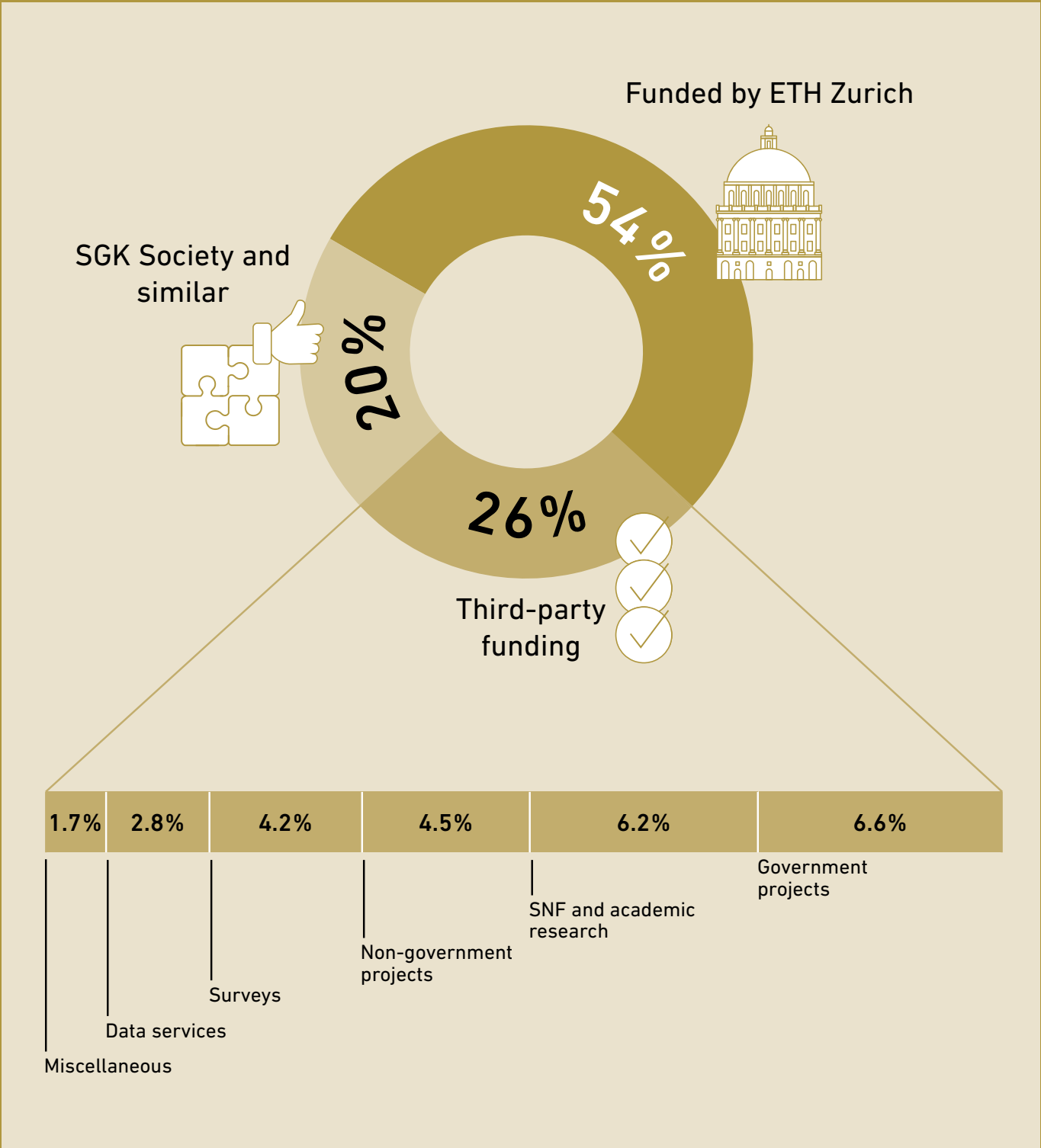
One of my main projects for 2023 is a paper in which I work with Marc Anderes and Florian Eckert to combine output gaps from various methods. The output gap is defined as the difference between



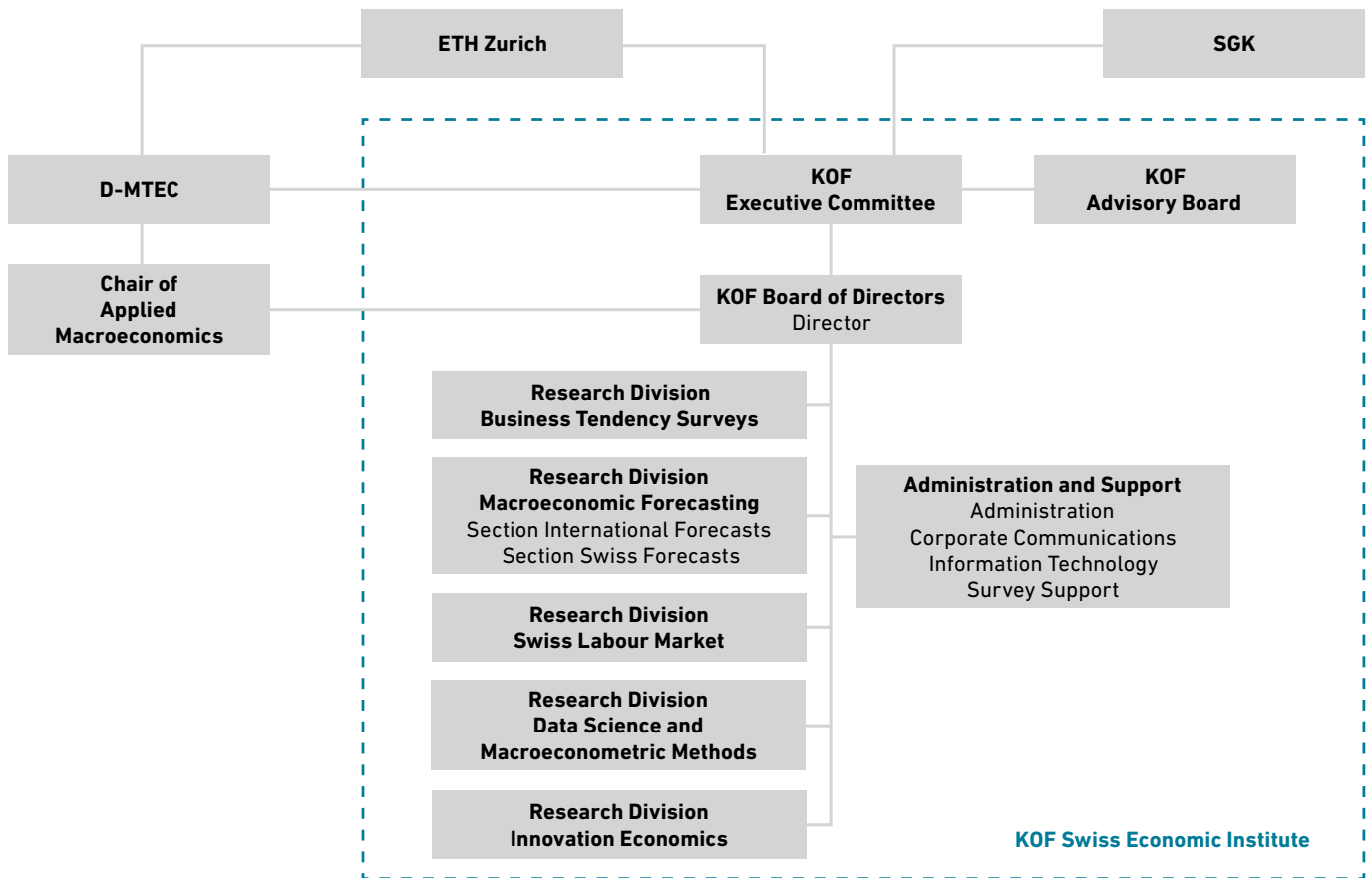
Nina Mühlebach.

the actual level of gross domestic product and its potential level. The output gap is a key determinant of central banks' response functions because it is seen as a predictor of inflationary and disinflationary pressures. Because the output gap is not an observable variable, however, it has to be estimated. This has therefore given rise to the development of various methods, which in some cases, however, estimate output gaps that differ significantly from each other and, at the end of random samples, are often subject to substantial fluctuations owing to data revisions and parameter instability. In our study we use a state-space model, which takes account of revisions of the various output gaps so that we can calculate a more revision-proof output gap.

Funding



Organisation



SGK: Swiss Society for Economic Research
 D-MTEC: Department of Management, Technology and Economics

Situation on 31 December 2022



Employees

Research Division Business Tendency Surveys



Dr Klaus
Abberger
(Head of Division)



Nina
Mühlebach



Pascal
Seiler



Stefanie
Siegrist

Research Division Macroeconomic Forecasting



Professor Dr
Michael Graff
(Head of Division)



Dr Heiner
Mikosch
(Head of Section
International
Forecasts)



Dr Maurizio
Daniele



Philipp
Kronenberg



Tim
Reinicke



Yngve
Abrahamsen
(Head of Section
Swiss Forecasts)



Marc
Anderes



Dr Isabel
Martínez



Sina
Streicher

Research Division Swiss Labour Market



Dr Michael
Siegenthaler
(Head of Division)



Justus
Bamert



Dr Daniel
Kopp



Kristina
Schüpbach



Salomé
Wittwer

Research Division Data Science & Macroeconometric Methods



Dr Samad
Sarferaz
(Head of Division)



Philipp
Baumann



Laurent
Florin



Paul
Maunoir
(internship)



Alexis
Perakis



Dr Alexander
Rathke



Dr Kieran
Walsh

Research Division Innovation Economics



Professor Dr
Martin Wörter
(Head of Division)



Dr Mathias
Beck



Johannes
Dahlke



Sebastian
Heinrich



Florian
Hulfeld



Dr Michael
König



Dr Andrin
Spescha

Administration and Support



Tolga
Coban
(Head of Division,
Team Leader Infor-
mation Technology)



Dr Matthias
Bannert



Stéphane
Bisinger



Charles
Clavadetscher



Oliver
Müller



Fabian
Picone



Anne
Stücker
(Team Leader
Corporate
Communications)



Vera
Degonda



Dr Thomas
Domjahn



Nicole
Koch



Corinne
Schibli-Lozano



Sabrina
Humbel
(Team Leader
Administration &
Survey Support)



Gilles
Aubert



Rebecca
Benatti



Katharina
Bloch



Sebastien
Dufournet



Martina
Meili



Manuel
Willmann

Research assistants



Diana
Diaz



Sina
Freiermuth



Wanja
Meier



Beat
Scherrer

Human resources

	31.12.2021	31.12.2022	Change in %	FTEs
Total employees (full-time equivalents [FTEs])	45.2	46.5	3.0	1.3
Temporary research positions	22.7	23.0	1.0	0.3
Temporary technical and administrative positions	3.4	2.0	-41.0	-1.4
By function				
Research staff	29.6	30.9	4.0	1.3
Full professors	2.0	2.0	0.0	0.0
Senior research staff	8.7	9.2	6.0	0.5
Postdoctoral students	3.9	3.0	-23.0	-0.9
Doctoral students	12.6	13.6	8.0	1.0
Trainees	0.0	1.0	100.0	1.0
Research assistants	2.4	2.1	-13.0	-0.3
Technical and administrative staff	15.6	15.6	0.0	0.0
Technical and IT staff	5.0	4.9	-2.0	-0.1
Administrative staff	10.6	10.7	1.0	0.1
By division				
Research Division Business Tendency Surveys	4.6	4.0	-13.0	-0.6
Research Division Macroeconomic Forecasting	12.6	9.4	-26.0	-3.3
Research Division Swiss Labour Market	–	4.6	–	4.6
Research Division Data Science and Macroeconometric Methods	4.6	6.6	43.0	2.0
Research Division Innovation Economics	6.4	6.2	-4.0	-0.3
Administration and Support	17.0	15.8	-7.0	-1.2

Official bodies

Swiss Society for Economic Research (SGK)



Ueli
Dietiker



Christian
Mähr



Dr Stephan
Mumenthaler



Dr Eric
Scheidegger



Dr Martin
Schlegel



Mario
Senn



Dr Christian
Waldvogel

Chairman

- Ueli Dietiker, former CFO of SWISSCOM AG

Members

- Christian Mähr, UBS AG
- Dr Stephan Mumenthaler, Scienceindustries
- Dr Eric Scheidegger, State Secretariat for Economic Affairs (SECO)
- Dr Martin Schlegel, Swiss National Bank (SNB)
- Mario Senn, Office of Economic and Labour Affairs, Canton of Zurich (until 31 October 2022)
- Dr Christian Waldvogel, Renaissance Foundation & Management

Responsibilities

The Swiss Society for Economic Research (SGK) – a society within the meaning of section 60 ff. of the Swiss Civil Code – assists KOF in its empirical research into economic developments and trends in Switzerland and supports the business surveys and economic forecasting services offered by the institute as part of a contractually agreed collaboration with ETH Zurich. SGK's Executive Board oversees the society's operations and helps KOF to acquire funding for its research.

SGK's Executive Board meets once a year prior to the society's General Assembly in spring.

The society's General Assembly and one ordinary meeting of SGK's Executive Board were held in 2022. After the General Assembly had twice taken place in the form of written resolutions on the basis of Ordinance 3 on Measures to Combat Coronavirus, the Executive Board decided to hold the 85th General Assembly as an in-person event in Zurich. The 2022 General Assembly therefore took place on 9 May.

The main items on the agenda were membership trends, KOF's strategic repositioning and the development of successful advertising strategies for acquiring new SGK members. Dr Martin Schlegel, SNB, was elected for a further term as a member of SGK's Executive Board.

The SGK Society had roughly 140 members in 2022. SGK members receive a newsletter containing a link to the quarterly journal *KOF Analysen*. This publication provides analysis and forecasts of international economic conditions as well as developments and trends in the Swiss economy. Each issue also includes KOF staff members' analysis of the latest research topics. In addition, members received invitations to KOF's annual forecasting conference and to the KOF economic forums organised by SGK three or four times a year.

Mario Senn, Office of Economic and Labour Affairs, was recalled as a member of SGK's Executive Board by the Government Council of the Canton of Zurich at the request of the Department for Economic Affairs with effect from 31 October 2022. He was replaced on the Executive Board with effect from 1 November 2022 by Dr Fabian Schnell, who will be officially elected at the 86th General Assembly in 2023. ■

KOF Executive Committee



Dr Julia
Dannath



Professor Dr Hans
Gersbach



Dr Eric
Scheidegger



Dr Martin
Schlegel

Chairperson

- Dr Julia Dannath, ETH Zurich

Members

- Professor Dr Hans Gersbach, ETH Zurich
- Dr Eric Scheidegger, State Secretariat for Economic Affairs (SECO)
- Dr Martin Schlegel, Swiss National Bank (SNB)

Responsibilities

KOF is managed by an Executive Committee comprising equal numbers of members from ETH Zurich and the Swiss Society for Economic Research (SGK). The KOF director attends the Committee's meetings in a consultative capacity. As well as approving the financial accounts for the previous year and the budget for the following year, the Committee oversees KOF's strategic development. To this end, the Executive Committee convenes an Advisory Board, whose members are proposed by KOF's Board of Directors.

Since 2021 the Executive Committee has been chaired by Dr Julia Dannath, Vice-President of Personnel Development and Leadership. In addition to Dr Dannath the Executive Committee comprises Professor Dr Hans Gersbach, D-MTEC at ETH Zurich, Dr Martin Schlegel, Vice Chairman of the SNB's Governing Board, and Dr Eric Scheidegger, Deputy Director of SECO. KOF's Executive Committee generally meets twice a year. The Chairperson stepped down from her post at the most recent meeting in November 2022 because the Executive Committee is being reconstituted as a Strategic Advisory Board owing to KOF's new rules of procedure, which come into effect on 1 January 2023. ■

KOF Advisory Board



Professor Dr
Martin Brown



Dr Oliver
Adler



Livio
Lugano



Professor Dr
Matthias Lutz



Professor Dr
Dina Pomeranz



Dr Peter
Schwendener



Dr Klaus
Wohlrabe



Professor Dr
Conny Wunsch

Chairman

- Professor Dr Martin Brown,
Study Center Gerzensee

Members

- Dr Oliver Adler, formerly Credit Suisse AG
- Livio Lugano, Federal Statistical Office (FSO)
- Professor Dr Matthias Lutz, Swiss National Bank (SNB)
- Professor Dr Dina Pomeranz, University of Zurich
- Dr Peter Schwendener, Federal Finance Administration (FFA)
- Dr Klaus Wohlrabe, CES ifo Group Munich
- Professor Dr Conny Wunsch, University of Basel

Responsibilities

The Advisory Board is a permanent body that helps the Executive Committee, KOF's Board of Directors and the heads of the research divisions to perform their functions, ensures independent quality controls and advises KOF on its long-term research and development planning. It also helps to strengthen the contacts between KOF and national and international academic research bodies as well as the relevant economic policy institutions.

Professor Dr Martin Brown, Director of the Study Center Gerzensee, took on the role of Chairman of the Advisory Board in 2022. Professor Dr Dina Pomeranz, Professor of Applied Economics at the University of Zurich, joined the Advisory Board as a new member. KOF's Advisory Board generally meets twice a year and is being reconstituted as an Academic Advisory Board owing to KOF's new rules of procedure, which come into effect on 1 January 2023. ■

Research fellows

Professor Benjamin Balsmeier
University of Luxembourg, Luxembourg

Dr Frank Bohn
Radboud University, Netherlands

Professor Nauro F. Campos
University College London, United Kingdom

Dr Florian Chatagny
Federal Finance Administration, Switzerland

Professor Dr Jakob de Haan
University of Groningen, Netherlands

Professor Dr Laurent Donzé
University of Fribourg, Switzerland

Professor Dr Axel Dreher
University of Heidelberg, Germany

Dr Florian Eckert
Swiss National Bank, Switzerland

Professor Dr Ulrich Fritsche
University of Hamburg, Germany

Dr Jaqueson K. Galimberti
Auckland University of Technology, New Zealand

Professor Dr Martin Gassebner
Leibniz University Hanover, Germany

Professor Dr Jochen Hartwig
Chemnitz University of Technology, Germany

Professor Dr Daniel Kaufmann
University of Neuchâtel, Switzerland

Mahsa Khoshnama
Princeton University, United States

Professor Dr Michael Lamla
Leuphana University Lüneburg, Germany

Professor Dr Sarah M. Lein
University of Basel, Switzerland

Professor Dr Simon Lüchinger
University of Lucerne, Switzerland

Professor Dr Pierre Mohnen
Maastricht University, Netherlands

Professor Dr Christoph Moser
University of Erlangen-Nuremberg, Germany

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Switzerland

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Latvijas Banka, Latvia

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Monash University, Australia

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