SUERF
The European Money and Finance Forum

Joint Vienna Institute

OESTERREICHISCHE NATIONALBANK
EUROSYSTEM

48th OeNB Economics Conference 2021
in cooperation with SUERF and the JVI

GENDER, MONEY AND FINANCE

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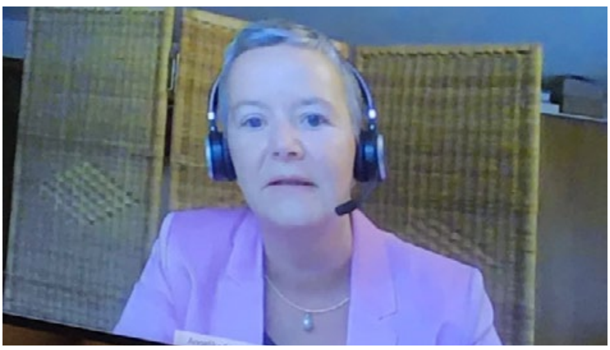


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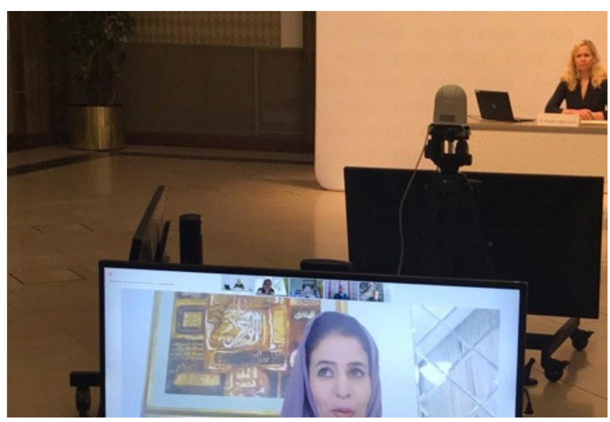

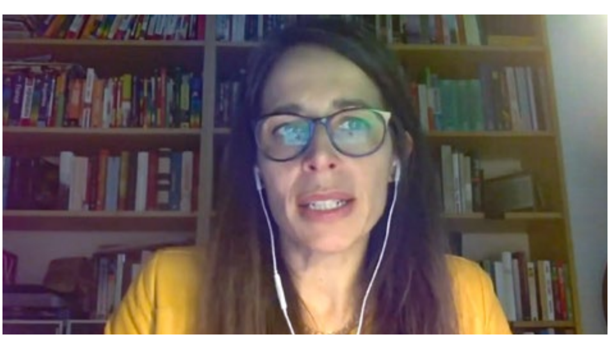

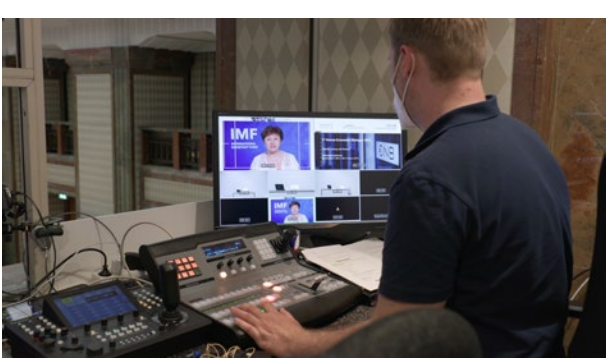

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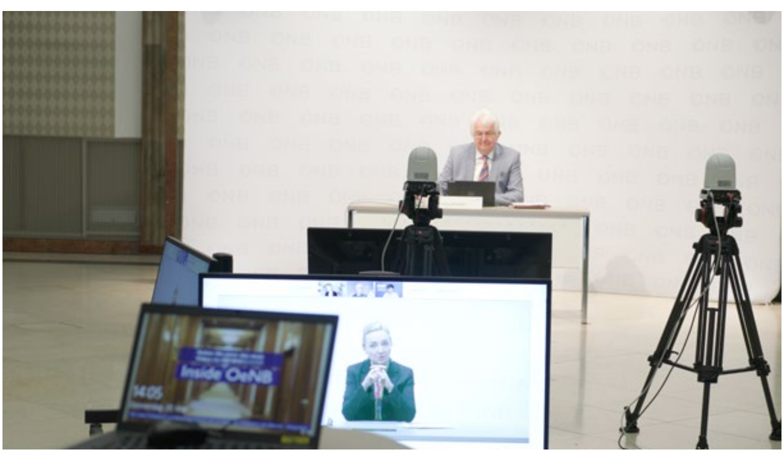

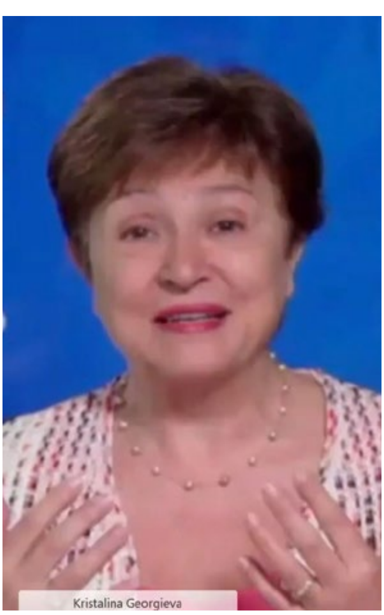

About SUERF –
The European Money and Finance Forum

SUERF stands for "Société Universitaire Européenne de Recherches Financières", the original name under which SUERF was established in 1963 in France. It is an independent and non-partisan member association, whose strength lies in bringing together three pillars of members: central banks and supervisors, financial industry representatives and academic researchers. For more than 50 years, SUERF has been dedicated to the analysis, discussion and understanding of European financial markets and institutions, the conduct of financial regulation, financial supervision and monetary policy. SUERF's main activities are events, publications and the support of young researchers, and is governed by its Council of Management, which includes senior representatives from central banking, the financial industry and academia. The Oesterreichische Nationalbank has hosted the SUERF Secretariat at its premises in Vienna since April 1, 2000.

If your institution is interested in joining SUERF, please contact: suerf@oenb.at or +43 1 40420 7206. For further information, please follow the links below:

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About the JVI – The Joint Vienna Institute

The Joint Vienna Institute (JVI) is a regional training center, primarily for public sector officials from countries in Central, Eastern and Southeastern Europe, the Caucasus, Central Asia, Turkey and Iran. It was established in 1992 by the Austrian Authorities (represented by the Federal Ministry of Finance and the Oesterreichische Nationalbank), the International Monetary Fund and several other international organizations.

The JVI mainly offers one- to two-week courses, seminars and workshops that focus on:

- macroeconomic policy formulation and management,
- monetary policy and the exchange rate system,
- financial sector stability,
- debt sustainability and management,
- tax policy and revenue administration,
- expenditure management,
- fiscal institutions and governance,
- legislative frameworks,
- macroeconomic and financial statistics and
- other specialized topics.

The objective of the JVI's training program, which is developed in consultation with the JVI's partners and the JVI-eligible countries, is to:

- help strengthen economic policies and institutions through comprehensive training on a broad range of operational issues and problems, with a special focus on policy formulation and implementation,
- give specialized training to deal with specific problems, set within the context of commonly shared concerns and experiences,
- foster the development of networks of officials across the region
- and provide opportunities for nationals of transition countries to gain first-hand experience of an advanced market economy (Austria).

The principles of cooperation and partnership guide the training at the JVI. Training programs may be offered either by one of the sponsoring organizations or jointly designed by several sponsoring organizations. In turn, sponsoring organizations and trainees benefit from the teaching experience, the exchange of ideas and the close cooperation with each other. For further information, please visit our website: https://www.jvi.org/home.html.

Barbara Kolm

Vice President

Oesterreichische Nationalbank

Opening remarks

Madame President of the European Central Bank![1]
Dear Ms. Managing Director Georgieva!
Excellencies!
Dear Governor Holzmann!
Ladies and gentlemen!

Good afternoon. My name is Barbara Kolm, and I am the Vice President of the Oesterreichische Nationalbank, Austria's central bank, which is a member of the Eurosystem. Today, I have the immense pleasure of welcoming you to the 48th OeNB Economics Conference in cooperation with SUERF and the JVI. I would like to thank you all for joining us, and I would like to extend my very heartfelt welcome to our distinguished speakers and panelists from around the world, who have so generously agreed to join us and contribute to this conference. It is *your* participation which turns this event into a truly international dialogue of the highest caliber.

This year's conference on gender, money and finance deals with a topic that is both close to my heart and very timely. The European Commission's "2021 Report on Gender Equality in the EU", which was published earlier this year, draws an unambiguously clear conclusion: the consequences of the COVID-19 pandemic have turned out to be a setback for many dimensions of gender equality in our private and professional lives. Unfortunately, and – I have to say – predictably mimicking observed patterns during previous crises[2], gender-based violence is on the rise in Europe and elsewhere. In addition, the economic fallout of the pandemic has disproportionately hit sectors with high female employment shares, while simultaneously preventing many women from continuing to work, due to their increased childcare duties.[3]

And yet, paradoxically, it appears that many governmental special task forces which have been created to tackle precisely these challenges exhibit a striking underrepresentation of women: a survey of 115 national, dedicated COVID-19 committees in 87 countries shows that only 3.5% of these task forces have gender parity, while more than 80% are led by men.[4]

Let me be frank with you, ladies and gentlemen. The evidence is clear and mounting that "uncomfortable" imbalances such as these are not the result of random draws, much less of meritocratic selection. Due to persistent stereotypes, path dependence, and status quo bias[5], women[6] still face an uphill battle when it comes to making their voices heard and their rights respected.

In her recent book, "Invisible Women – Exposing Data Bias in a World Designed for Men", Caroline Criado Perez provides myriad enlightening and sometimes breath-taking examples, testifying to the unfortunate timelessness of what Simone de Beauvoir has put into words already more than 70 years ago. To quote de Beauvoir: "The representation of the world, like the world itself, is the work of men; they describe it from

[1] *I would like to thank Kilian Rieder for his contributions to this speech. For citation, only the spoken version of this speech is relevant (please check against delivery).*

[2] *See World Health Organization (2005).*

[3] *See European Commission (2021) for European evidence and Alon et al. (2020) for the corresponding data on the United States.*

[4] *See Van Dalen et al. (2020).*

[5] *See, for example, Alesina et al. (2013).*

[6] *Of course, I acknowledge that the concept of gender is not exclusively represented by the simple man-versus-woman categorization I focus on in these opening remarks.*

their point of view, which they confuse with the absolute truth".[7]

Session 1 of today's conference addresses the question of how to achieve more gender-inclusive visions of and answers to our current challenges. Invincible rather than invisible, our two panelists of Session 1, IMF Managing Director Kristalina Georgieva and ECB President Christine Lagarde, will undoubtedly have a lot to share with us when discussing the role of gender in economic policymaking.

For all we know, measuring the causal effects of policies on gender parity and, vice versa, identifying the influence of gender on policy decisions is notoriously hard. Now, as argued by Professor Paola Profeta, one of our speakers in Session 2 this afternoon, monetary policymaking may be an exception to this rule.

Since monetary policy is decided on the basis of fairly widely known technical considerations that can be controlled for in empirical work, it seems to be particularly well-suited for disentangling the impact of gender on public policy outcomes.[8] Building on this insight, recent research shows that gender indeed does matter for central banking.

For example, while women tend to prioritize output and employment concerns during the deliberation phase of monetary policy meetings, their male colleagues appear to focus more on inflation and price stability.[9] And for those of you who prefer narratives to regression tables, let me point towards former Fed Governor Ben Bernanke's famous 2002 remarks on the impact of Anna J. Schwartz's and Milton Friedman's book "A Monetary History of the United States, 1867–1960". I quote: "Regarding the Great Depression. You're right, we did it. We're very sorry. But thanks to you, we won't do it again."[10]

By revisiting the role of the Federal Reserve during the Great Depression of the 1930s and thereby shaping the intellectual roots of monetarism, Anna J. Schwartz crucially contributed to our understanding of economic crises, while also paving the way for price stability to become the dominant target of monetary policy.

Hence, statistically and anecdotally, there should be little doubt that increased female participation can exercise a decisive effect on central bank policies. I am sure that Session 2 of today's conference will shed more light on how this effect plays out in concrete cases.

At the same time, the quest for gender parity must go beyond the realm of public policymaking – just as the impact of heightened gender diversity in turn is likely to influence the status quo in the private sector. Yet, jumping to conclusions might be a little more difficult in this regard. Recent discussions about the likely effects of increased female leadership in finance illustrate this point quite nicely.

On the one hand, what The Economist described as "the Lehman Sisters fancy" as early as 2009[11], namely, the idea that women are generally more risk averse than men, has by now been established as a well-documented fact.[12] On the other hand, a study by Prof.

[7] *The original French text reads as follows: "La représentation du monde comme le monde lui-même est l'opération des hommes ; ils le décrivent du point de vue qui est le leur et qu'ils confondent avec la vérité absolue." De Beauvoir (1976, p. 244).*

[8] *See Profeta (2020).*

[9] *See Ainsley (2019).*

[10] *See Bernanke (2002).*

[11] *See The Economist (2009).*

[12] *See Eckel and Grossman (2008).*

Renée B. Adams (Professor of Finance, University of Oxford, Saïd Business School), one of our panelists in tomorrow's Session 3 on gender and risk-taking, provides an important nuance to these very interesting implications of a general relationship between gender and risk aversion.

Prof. Adams would probably argue that, all else being equal, stronger female representation on bank boards may indeed have a mitigating impact on the buildup of systemic risk in the financial system. To put this in President Lagarde's words, [ceteris paribus (all else being equal)], and I quote, "if it had been Lehman Sisters rather than Lehman Brothers [in 2008], the world might well look a lot different today."[13]

However, the question remains, which things tend to be equal: Prof. Adams demonstrates how, due to the very specific selection into leadership roles, preferences of women CFOs or directors in finance may actually wildly differ from the preferences otherwise expressed by representative samples of Western female populations.[14] If that proposition holds true: would it be possible that Lehman Sisters might have behaved just like their male-dominated real-life counterparts after all? I am quite certain we all can't wait to hear the latest update on this discussion which will be presented during Session 3 tomorrow afternoon.

Those acquainted with the works of Virginia Woolf will know that the recourse to metaphorical sisters – as a marvelous trick that allows us to imagine a counterfactual, more gender-equal world – was brilliantly used long before 2009. In her 1929 book, "A Room of One's Own", Woolf invents the life and fate of William Shakespeare's fictitious sister to describe the unthinkable obstacles

faced by young women attempting to express their genius at the time. Albeit as extraordinarily gifted as her brother, Ms. Shakespeare, who – unlike Mr. Shakespeare – was barred from formal education, never manages to catch up with the lead her brother was so easily allowed to gain on her – not least because she was never given a real chance.

While circumstances have certainly changed for the better since Shakespearean times, even today, the head start men oftentimes still profit from when compared to women remains an important source of inequality in many areas of our daily lives.

To give you a real-life example, the research of Prof. Annamaria Lusardi (Professor of Economics and Accountancy, George Washington University School of Business), one of the panelists on tomorrow's closing session, highlights that, in contrast to their male peers, women in the final stages of their careers are particularly prone to lack the financial literacy and skills to make appropriate financial plans for their retirement.[15] Tomorrow's Session 4 on gender, financial literacy, inflation and COVID-19 will shine a light on why exactly some segments of the female population are financially less literate

[13] *See Lagarde (2018).*

[14] *See Adams and Ragunathan (2018).*

[15] *See Lusardi and Mitchell (2008).*

and how to best address these gaps in their financial knowledge.

Ladies and gentlemen, to round up my opening remarks, let me come back to what Criado Perez so clearly states in the afterword of her recent book – I quote: "to end gender inequality and the multiple persistent gender gaps, we need to close the female representation gap".[16] Only if women are adequately represented in decision-making bodies, in research and in all other areas of public life, only then will their voices be sufficiently heard.

One way to accelerate the attainment of this goal is to actively give women a say in the public sphere: with more than 95% female speakers, the 48th OeNB Economics Conference makes an important step in the right direction.

Thank you for your attention and please enjoy the conference!

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[16] *See Criado Perez (2019).*

Session 1:

Gender and economic policymaking

Robert Holzmann

Governor
Oesterreichische Nationalbank

Introductory remarks on Session 1

Good afternoon everyone![1]

It is my great pleasure to welcome you to the first session of the 48th OeNB Economics Conference in cooperation with SUERF and the JVI on gender, money and finance. I am particularly thankful to the two highly distinguished panelists who have agreed to join me today for this first session on the topic of gender and economic policymaking. I could hardly imagine any more suitable, outstanding candidates and role models for this panel. Hence, I am both very happy and very honored to be able to welcome Christine Lagarde, President of the European Central Bank, and Kristalina Georgieva, Managing Director of the International Monetary Fund, as panelists to this first session.

Our session's title, "Gender and economic policymaking", seems to be an appropriate starting point for contextualizing the topic we will discuss on this panel. In fact, the title itself may suggest a unidirectional focus of this session on the range of effects gender can have on economic policymaking, including both policy deliberations and policy decisions. Yet, the impact of economic policymaking on gender diversity and gender parity across the entire universe of socioeconomic and political dimensions certainly constitutes a second, equally valid perspective on our topic today. In her recent book, "Gender Equality and Public Policy", Prof. Paola Profeta (who will take part as a panelist in Session 2 of this conference) fittingly describes these two perspectives as the political economy angle and the public economics view of the link between gender and economic policymaking respectively.

Starting with the political economy aspect of our session, let me give you one concrete example of why gender matters for economic policymaking, and why increased gender diversity can have substantial positive economic effects by boosting the quality of policy decisions. To be sure, while I focus on one specific economic rationale here, there is a vast range of other moral, philosophical, political and socio-economic reasons why increasing gender diversity should constitute a priority in economic policymaking.

In modern democracies, policy decisions are rarely taken by individuals. Decision-making bodies often comprise committees of experts and politicians – and there are good reasons for this. Back in the 18th century, a certain Marquis de Condorcet already noted that the majority of an imperfectly informed, homogeneously skilled group is more likely to make the correct choice than any individual member of that group. Under the assumptions that all group members reveal their signals about the state of the world, that information is obtained as well as aggregated at no cost and that all members share the common goal of taking a correct decision, while not being able to communicate before voting, the probability of choosing the right option by majority decision converges to one as group size increases.[2]

How does Condorcet's insight relate to gender diversity, you ask? Well, intuitively, the superiority of committee decision-making hinges on the degree of diversity in terms of information gathering and information processing heuristics inside the group.[3] Several decision-makers

[1] *I would like to thank Kilian Rieder for his contributions to this speech. For citation, only the spoken version of this speech is relevant (please check against delivery).*

[2] *See Gerling et al. (2005) for a summary of Condorcet's jury theorem and an extensive survey on group decision-making.*

[3] *See Rieder (2021) for a discussion of this point in the context of monetary policy decision-making.*

with different signals or different perceptions of the information at hand may be able to extract and put more relevant facts "on the decision table" than an individual decision-maker plausibly could. Now, as myriad scientific experiments have shown, different genders exhibit statistically different decision-making characteristics.[4] Some of the most well-known examples in this regard include the degree of altruism, risk aversion and negotiation strategies.[5] Hence, without gender parity, we may not only leave a large part of the global talent pool untapped, but we also risk foregoing significant improvements in the quality of economic policy deliberations and decisions.

Of course, some may argue that the demanding assumptions underlying Condorcet's jury theorem may not hold in real life. Also, causal empirical evidence for the effect of increased gender parity on the quality of decisions is hard to get by for many reasons. The quality of decisions can be hard to measure objectively and the impact of gender on economic policymaking is difficult to disentangle from that of other personal or professional characteristics. Context matters here, as may selection effects and the attainment of a critical mass threshold.[6] Yet, while all these challenges make it difficult to predict the precise effects of increasing gender parity on economic policy outcomes, it is important to emphasize what they share in common: none of them constitutes a cogent argument for advocating *against* more gender diversity. When you think about it, we constantly take policy decisions based on strong theoretical underpinnings and analogical empirical reasoning rather than precise causal estimates of the policy at hand – and, to be sure, monetary policy is no exception here. I think the time is more than ripe to apply the same standards when it comes to pushing for more gender parity.

This brings me to the public economics view on the link between gender and economic policymaking. The reason why economic policymaking needs to play an active role in enhancing gender parity – and here I refer to gender parity in more general terms, beyond the mere composition of decision-making bodies – is certainly not limited to the "benefit of the doubt" type of argument mentioned above. Research has shown that gender inequality and gender gaps around the world often depend on nurture, rather than only nature.[7] Persistent stereotypes are known to lock in inefficient equilibria due to path dependence and the intergenerational transmission

[4] *See Profeta (2020a), in particular chapter 5, for an excellent summary of relevant research on this topic.*

[5] *Experimental research on these topics abounds. Profeta (2020a), in particular chapter 5, summarizes the main contributions to the field. Some examples are as follows. For altruism, c.f. Andreoni and Vesterlund (2001); for risk aversion c.f. Eckel and Grossman (2008); and for negotiation strategies, c.f. Small et al. (2007).*

[6] *See Profeta (2020a), Chapter 5 for a detailed discussion of the empirical challenges involved in identifying the causal effect of gender on behavior and policies.*

[7] *See Profeta (2020a), Introduction, Chapter 2 and Chapter 5 for a discussion of the caveats associated with the difference between "nurture" and "nature".*

of certain cultural values.[8] Moreover, status quo bias can prevent even very highly qualified women[9] from ascending the ranks, and this rings particularly true for economic policy decision-making bodies.[10] Hence, if we value an increase in gender diversity, and – as I have argued – there are good reasons to do so, sitting it out will not be a sufficient strategy to tackle these dynamic inefficiencies.

To address them, public economics may naturally draw procedural policies, such as quotas. Yet, substantive economic policies are equally key in achieving sustainable forms of gender parity. In a seminal work first published in 1949, which remains uncomfortably relevant in today's world, Simone de Beauvoir noted that the "abstract legal framework alone does not suffice to define the concrete situation of women; this situation depends to a large extent on the economic role women play in society".[11] Breaking the still prevailing "glass ceiling" requires bottom-to-top empowerment encompassing targeted fiscal, social and labor market policies as well as educational initiatives.[12]

As Prof. Profeta makes clear in her book, the political economy angle and the public economics view cannot be meaningfully separated as they are constantly interacting in feedback and amplification loops: the degree of gender diversity in decision-making bodies shapes economic policies, which, in turn, influence progress and sadly sometimes also setbacks in terms of gender parity in many areas of public and private life – and vice versa. Thus, I hope that we will be able to shed some light on both of these perspectives and their interactions during the remaining time of this session by sharing in our distinguished panelists' personal, professional and institutional experiences.

[8] *For example, see Alesina et al. (2013). See Diouf and Pépin (2017) for the specific context of monetary policy.*

[9] *To be sure, the author explicitly acknowledges that the term gender encompasses more than the simple dichotomy male vs. female.*

[10] *For example, by 2019, only 8% (14 out of 173) of all central banks were headed by a woman (Istrefi, 2019). 94% of all European Central Bank's Governing Council members serving between 1998 and 2018 were men – and other major central banks do hardly any better. See also Profeta (2020b) for status quo bias and Riboni and Ruge-Murcia (2008) on inertia in committee decision-making settings.*

[11] *The original French text reads as follows: "[L]e droit abstrait ne suffit pas à définir la situation concrète de la femme; celle-ci dépend en grande partie du rôle économique qu'elle joue." De Beauvoir (1976, p. 153).*

[12] *See for example Del Boca and Locatelli (2008).*

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Kristalina Georgieva

Managing Director
International Monetary Fund

Transcript of Kristalina Georgieva's speech

Thank you very much, Claire, and wonderful to be together with Christine Lagarde and to listen to Vice President Kolm and to Governor Holzmann. What you would hear from me would echo a lot of what they have already said. And I would try to expand it a bit in the context of where the world economy is today, what is ahead of us. There is no question that at the time of wrestling with the worst crisis we have experienced in peace times since the Great Depression, we need all the talent of this planet, men and women. There is such strong evidence that when women are involved in decision-making, communities fare better, countries fare better, the world fares better. And it is right now paramount that we recognize how much we have to step up – we women but also men to make more space for women. And I will concentrate on three critical challenges that are ahead of us.

The first one is this crisis. Even when we come on the other side of it, it will leave some deep scarring. It would leave scarring because of educational attainment: many children have lost more than a year of studies in developing countries, where internet penetration is not the same; in Africa it is only 50%. It meant losing on school, leaving school; and we know that when school resumes fewer girls will go back than boys. When we look forward, it is critical to press so education steps up, investments in human capital, in education, in health, in social protection are strong and that they are provided to boys and girls, men and women, on equal footing.

Even more significant scarring from this crisis is the increase in inequalities within countries, across countries – a dangerous divergence that can severely impact the very fabric of our societies. Within countries, we know who is hit the hardest: young people, low-skilled workers and women. And Christine is right: the evidence on employment in advanced economies is ambiguous. It looks like there is a return to employment fairly equal from a gender perspective, but in developing countries this is not yet the case. In developing countries, women are more in the informal economy and in the contact-dependent industries, which are really suffering.

And in both developed and developing countries, this recession is a mum-cession. We called it she-cession, but the accurate term is mum-cession because it is mothers of young children that have the hardest time to return to work. When they are low-skilled, the hit on them is very severe. Across countries, we see advanced economies pulling out: they have more fiscal space to act, more monetary policy space; they also have much better access to vaccinations, whereas developing countries for these two reasons being constrained are falling further behind. Again, we have to think of how we can overcome this scarring by bringing more the care and empathy of women.

Christine spoke very clearly about trust, that women are more trusted. Women also show more empathy, they are more likely to think about the vulnerable, those that are left out. They are more likely to recognize that policies are for people, that we need to understand how different groups of people are affected, and therefore much more likely to pull us out of this. My message is to women: Step up! Step up! Be counted! And of course, that is a long-term proposition. We have made some progress; we have to do more.

My second point is on the biggest lesson we learned from this crisis, and it is the importance of resilience. After

2009, we concentrated on the resilience of the banking sector. And it has paid off. We are not faced right now with a financial crisis. But that concept of resilience was too narrow. First, it did not include the nonbanking financial institutions, the unfinished agenda from 2009; but second, it doesn't recognize that in a more shock-prone world than we know, climate is a big source of shocks yet to come. We have to build resilience in a more comprehensive manner, and it is much more likely when we have women at the decision table that this would happen. Resilient people, resilient planet, resilient economy.

To respond to Christine: she asked whether we have updated the study that says that despite the evidence that women in leadership positions in the financial sector correlates to a more resilient financial sector, the picture is pathetic. I mean, only 2% – Christine, still 2%. There hasn't been a big move up of women CEOs of banks and slightly more than 20% of women on boards. I, for one, believe that we have to be determined; and on the question of should there be quotas, I'm of the view that yes, if we know that our financial sector would perform better with more women and we see they are too slow to climb up, maybe we do have to put a ladder and force that climbing up to happen faster. I can live with targets, but I cannot accept that we just let it happen on its own because it is going to be too slow to serve the world, not just women.

My third point is digital. Who is the big winner of this crisis? It is the digital economy, and there the place of women is still to be acquired. Only 10% of FinTech owners and board members are women. And that holds the increased digital access to digitalization for women, and it holds back the expansion of women in fintech. Actually, IFC has done a very interesting study that shows that first, investment teams are tilted towards being mostly men in fintech, and then second, when you have women, the likelihood of opening up investment opportunities for women jumps up multiple times. So, if we want the future to be one in which the access to fintech and development of entrepreneurship of women is boosted, now is the time to again press and step up.

I want to say a word – and Christine also talked about it – of our own responsibility. We have to walk our own talk. At the IMF, I was very fortunate to come after Christine. She built that clear understanding that womenomics is just good economics, so we have gotten ahead. She built the pipeline of women, and I am very proud. Christine, I have been waiting for this moment to report to you because you built this pipeline: from 25%, we are now close to 40% of women directors. To be exact, we have 37% women directors, and we will go to equality in the ranks, for sure, because we are building this pipeline.

But most importantly, the IMF is very actively engaging the membership on building capacity in finance authorities, in economic policy, especially on the issue of gender-based budgeting. Because when budgets change, then the economy does better. And over the last year of crisis, we have been relentless in pressing for this gender-based budgeting because of the scarring I spoke about, because of the pressing need to come out of the crisis stronger. We have done overall training on gender-based budgeting for 114 countries, a lot of it with the Joint Vienna Institute. Last year alone, 2020, we did training for 58 countries, and I take full responsibility for us to be watchful. We appointed the first in the history of the IMF senior adviser on gender because the moment is now.

The moment is now, not only not to allow to go back on gender equality, but to step forward. And this discussion today, tomorrow, I do believe is the right way to engage in a very determined manner to step forward. Thank you, Claire. Thank you, everybody.

Claire Jones
Global Economy Reporter
Financial Times

Summarizing thoughts on Session 1

The aim of our session was to delve into the topic of gender and economic policymaking.

The introductory remarks by the governor of the Oesterreichische Nationalbank, Robert Holzmann, set the tone well, summarizing some of the main arguments in favor of gender diversity for better decision-making.

We could not have wished for two more high caliber panelists in Kristalina Georgieva, Managing Director of the International Monetary Fund, and Christine Lagarde, her predecessor at the Fund, who now heads the European Central Bank. Panels with high profile speakers carry with them high expectations. Sometimes those expectations are dashed; on this occasion, however, I believe they were delivered.

Both the IMF managing director and the ECB president were able to highlight not only the advantages of having more female decision-makers in the spheres of economic officialdom and finance but underline the case for addressing gender inequalities through sound policy decisions.

The need for the latter is acutely important right now. Women have, on average, been worse affected by the pandemic's economic impact than their male counterparts, widening the gap that existed pre-COVID-19. Explaining the drivers and characteristics of that widening gap, and how it might be closed, was one of the strengths of the discussion.

The personal experiences of both were fascinating to hear and I think will have encouraged young female economists and, indeed women in general, to not give up on their ambitions. Madame Lagarde was strong in emphasizing the importance of being true to oneself and recognizing that succeeding should be done on one's own terms, with employers needing to become more supportive of women who wish to take career breaks for family reasons. Both the ECB president and Madame Georgieva underlined the importance of strong role models, with the IMF managing director mentioning a meeting with Angela Merkel as a source of inspiration. Both also highlighted the work that the IMF and the ECB are doing to help female economists, through promotions and scholarships.

What made the session stand out was not only the panelists' experience but the rapport between them. Both have worked with each other over the years and the friendship between them really shone through. Both left their opening remarks short and to the point, which helped leave a lot of time for questions – including some excellent ones from the audience. The conversation was very fluid and covered a lot of ground, explaining in some detail why leaving women out of decision-making was not only morally abhorrent but economically inefficient too.

They complemented each other well in the sense that Madame Georgieva was able to offer a global perspective that went beyond Europe. I learnt a lot from her remarks of the role of female entrepreneurship in Africa and on business savvy often being undermined by a lack of access to financial services. Her experiences in academia also shed light on some of the reasons why there are not more female economists, while highlighting that many institutions – including the IMF and the World Bank – are led by women who have joined from some of the most prestigious economics departments in the world.

Lastly, it was an honor to moderate the panel. I would like to thank Rudolf Kaschnitz for the kind invitation and Carina Rotheneder and the rest of the team at the Oesterreichische Nationalbank for their excellent organization and professionalism. Many congratulations for the success of the event.

Session 2:

Central bank decisions by committee: does gender matter?

Doris Ritzberger-Grünwald
Director of the Economic Analysis and Research Department
Oesterreichische Nationalbank

Introductory remarks on Session 2

Ladies and gentlemen, welcome to the second session of our conference on gender, money and finance.

Recently, Isabel Schnabel, Member of the ECB's Executive Board, said in an interview that it makes such a big difference to the tone of and the decision making in meetings if another woman is present. All of you will also remember the photo that was posted by Christine Lagarde, when she invited her ECB council colleagues to an informal exchange of views over dinner for the first time. As one observer rightly noted, there were more paintings of women hanging on the wall of the conference room than women sitting around the conference table.

The reality is that since the start of the euro, the ECB's Governing Council has been dominated by men by a vast majority. This phenomenon is not only true for the Eurosystem in particular; it also holds for the central bank community in general, where decision-making bodies continue to be male dominated.

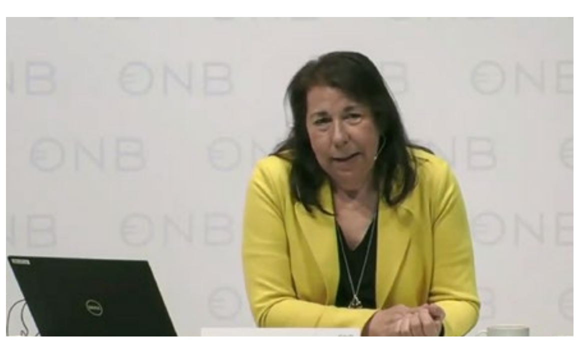
In fact, the feeling described by Isabel Schnabel also became familiar to me, when I had the possibility to participate in several committees, regardless of which institution or in which setting: be it the Bank for International Settlements (BIS), the International Monetary Fund (IMF), the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD) or the high-level Monetary Policy Committee of the Eurosystem; be it an exchange of views with professors from universities or researchers from local research institutes. Nine out of ten times, you end up in a male-dominated environment. All the more so, if you are working on a topic closely related to money and finance.

At the beginning of my career, I thought that things would change and that the women I had met during my (postgraduate) studies at university would join one or the other committee after a while. But they would not.

The idea for this conference was born two years ago, when Ernest Gnan, Head of the Economic Analysis Division of the Oesterreichische Nationalbank (OeNB), and I were sitting – once again – in a meeting held by a committee consisting primarily of men. We then got to work, and here we are today: we are extremely proud that so many successful women from the "money and finance community" have joined us for this event.

Each of the following three sessions will be chaired by a female director of the OeNB: Karin Turner-Hrdlicka, Director of the Department for the Supervision of Significant Institutions, Petia Niederländer, Director of the Payments, Risk Monitoring and Financial Literacy Department, and myself, Director of the Economic Analysis and Research Department. Three women at the directors' level is definitely a success story; however, this success story is relativized by the fact that the OeNB currently has an all-male Governing Board. And while 40% of OeNB staff are female, only a mere 26% of managers are women.

Yet, we have demonstrated last year that deliberate action can bring forward a change: an incentive scheme to promote women on expert career tracks helped raise the share of women in expert careers from 35% in 2020 to 38% one year later. Going beyond this specific example, gender-related activities at the OeNB



have a long-standing tradition and have been further strengthened by the fact that since 2015, the Austrian Federal Equal Treatment Act also applies to the OeNB. Therefore, we have a legally binding "action plan for the advancement of women" in place.

But let me come back to the beginning of my introductory remarks, as this session will explicitly deal with the topic of "Central bank decisions by committee: does gender matter?". Considerable caution is warranted when investigating the question of whether stronger female participation in monetary policy decision-making committees changes the focus and pattern of decisions or deliberations.

On the one hand, the current underrepresentation of women makes it difficult to precisely estimate the effects of female presence. On the other hand, the existing literature on the effects of gender on monetary policy decision making is inconclusive. Thus, seemingly opposing results regarding female voting behavior in monetary policy committees need to be taken with a grain of salt for several reasons.

First, the findings are hardly suitable for a rigorous comparison, given that they may be driven by sampling effects. Moreover, the periods and geographical areas under review vary substantially across studies, as does the level of analysis (country-level cross sections versus member-level panels). Second, existing contributions all suffer from identification challenges, albeit to varying degrees. While the studies uncover robust correlations in the data, the estimated coefficients may not reflect the causal effect of gender on voting behavior in committees. Last but not least, the diversity of teams may also have an impact, as voting behavior may, inter alia, be influenced by the interactions between committee members.

I am convinced that my guests will provide some clarification on these open questions, as they either work in academia or hold top positions in central banking. Let me warmly welcome Paola Profeta, Professor at Bocconi University, Rannveig Sigurðardóttir, Deputy Governor of the Central Bank of Iceland, Sylvie Goulard, Second Deputy Governor of the Banque de France, and Ana Ivković, Vice Governor of the National Bank of Serbia.

Finally, before giving the floor to our panelists, let me quote from the International Women's Day website: we have only reached our goal if we no longer need to commemorate Women's Day. With reference to this, I would like to conclude by saying: we have only reached our goal if we no longer need a separate conference on gender, money and finance.

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Sylvie Goulard

Vice Governor

Banque de France

Gender, women economic concerns and monetary policy decision-making[1]

"*My ambition is to be this owl that is often associated with a little bit of wisdom.*" – Christine Lagarde, ECB President at her first ECB press conference, December 2019.

From the city of Athens back in ancient Greece to the European Central Bank (ECB) today, the owl of Athena, called Athene Noctua, is linked with money. A symbol of knowledge, wisdom, perspicacity and erudition, Athene Noctua was then both a representation of the Goddess and the symbol struck on Athenian coins. Today, it is still engraved on Euro coins struck in Greece, and – as underlined by Christine Lagarde in the introductory quote – the principles it enshrines are at the heart of any decision-making committee serving the public good.

From various experts in monetary policy, we know that knowledge, wisdom, perspicacity and erudition are among the most-needed ingredients of any central bank deliberation:

- *Knowledge* about the real economy and about the various views of economic agents is required for decisionmakers to take informed decisions to minimize policy errors (Morris and Shin, 2002; Gaballo, 2016);
- *Wisdom* gives the ability to use the available knowledge and experience to make good decisions and judgments. From a monetary policy point of view, it is key that the economic agents capture the diversity of views on future economic developments, especially when policy rates are at the effective lower bound (Krugman, 1998; Eggertson and Woodford, 2003);
- *Perspicacity* gives the ability to understand things quickly and make accurate judgments, be it in situations requiring urgency, e.g. in case of a financial crisis, the lender of last resort should act quickly as advocated by Bagehot (1873), or patience, e.g. to decrease or increase its policy rate (see Bernanke, 2004);
- *Erudition* is especially helpful for committees to minimize policy errors arising from the beliefs, dogmas or ill-rooted theories of policymakers (Friedman and Schwartz, 1961) or, in the words of Hansen and Sargent (2001), to adopt a robust approach that avoids errors based on using the wrong model for policy decisions.

Against this background, the extreme gender imbalance in central banking impedes those four qualities. Therefore, accounting for the diversity of views and theories should be the goal of any decision-making committee. After a brief outline of the gender imbalance, I illustrate how more gender diversity will help decision-making committees to better match those four "owl-associated" qualities.

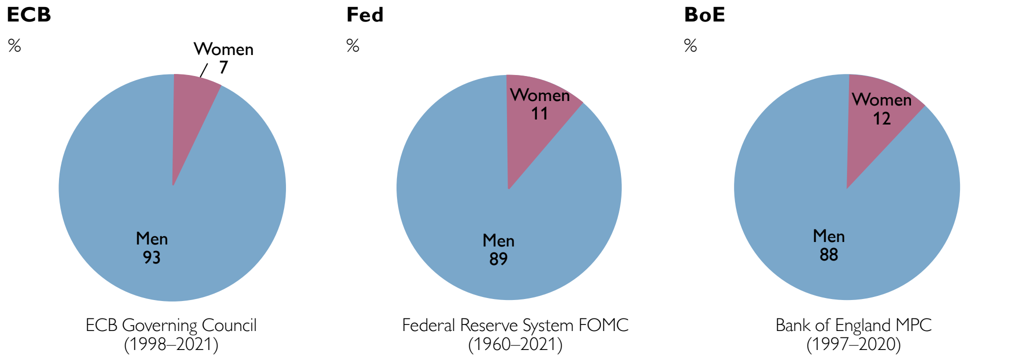
1 It's a man's world with a glass ceiling slow to crack

At the top, central banking was and still is a man's world: Up until now, decisions have been deliberated and taken by men, and since the creation of the ECB, women have held 7% of the governing council's seat – a percentage that is slightly lower than at the Federal Reserve System (Fed) or the Bank of England (BoE), where women have held 11% and respectively 12% of the seats of the Federal Open Market Committee (FOMC) or the Monetary Policy Committee (MPC) (chart 1). In the first 23 years of the Eurosystem's existence, Chrystalla Georghadji was the only female governor of a national central bank (NCB), namely in Cyprus between 2014 and 2019. Since she has left, there is no more female governor – only the

[1] *The views expressed here do not necessarily reflect those of the Banque de France or the Eurosystem.*

Chart 1

A hard "glass ceiling" in monetary policy committees



Source: Istrefi K. and G. Sestieri. 2018. Central banking at the top: it's a man's world. Banque de France blog. https://blocnotesdeleco.banque-france.fr/en/blog-entry/central-banking-top-its-mans-world.

board includes two women, Christine Lagarde and Isabel Schnabel. The numbers are not that different for top managers, though the situation is slowly improving. To take the Banque de France as an example, women hold 30% of the top management positions against 21% in 2012, despite the fact that 46% of the staff is female.

The gender share in central banking is especially low when compared to the level achieved in national and local assemblies or in the governments of the European Union's countries.[2] It is also much lower than the gender share of European listed companies. To add some pessimism, the glass ceiling in expert groups seems slower to crack, as shown by the large imbalance in national COVID-19 task forces reported by the 2021 EU report on gender equality (van Daalen et al., 2020).

2 Do economic concerns of women differ from those of men?

It is always dangerous to generalize. However, women tend to have differing views from men on economic and monetary matters, maybe because they are women; but maybe also because as women, they are often less educated, less paid and still more likely in charge of housekeeping than men. This difference was once again confirmed during the various events organized this year by the ECB and the national central banks of the Eurosystem in the context of the ongoing Strategy Review of the Eurosystem.

At the European level, the ECB launched the ECB Listens Portal[3], encouraging the public to express their views on a range of issues. As most of the academic literature on gender indicates, women and young adults were underrepresented, as only 22% of respondents were female (at least most of them young, which is encouraging). When expressing their concerns, they were more vocal about issues such as the declining purchasing power, the worsening economic outlook, unemployment and job precariousness, climate change and growing inequality as well as poverty (chart 2).

In France, the results of a survey, conducted by the Banque de France in the course of its Banque de France

[2] *See the 2021 report on gender equality in the EU: https://ec.europa.eu/info/sites/default/files/aid_development_cooperation_fundamental_rights/annual_report_ge_2021_en.pdf.*

[3] *https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview002.en.html.*

listens event[4] with over 5 000 French people participating, also confirm some of the ECB's findings. Unsurprisingly, respondents working in the financial sector and men were considerably more likely to admit to having sound knowledge of the ECB and NCBs. As in the ECB survey, women are more worried about the economic situation than men, they put social exclusion and poverty among their top economic priorities (44% vs. 36% of men), and they are less likely to report basic or very good knowledge of monetary policy (4% vs. 11% of men).

Two consequences follow:

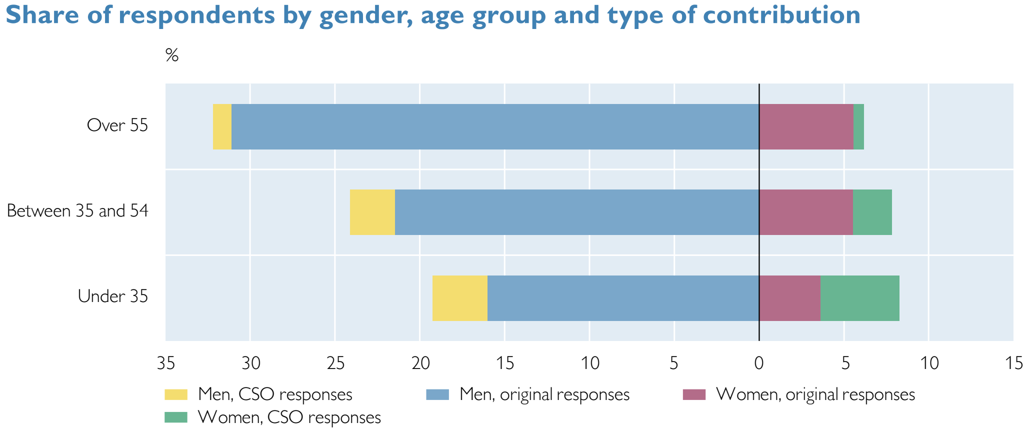
Firstly, men and women have diverging views, and their differing ratings of their knowledge about monetary policy makes them pay attention to different topics of monetary policy news. As underlined by Isabel Schnabel from the ECB, "It's really about equality of opportunity, not about equality of outcome" (Arnold and Dombey, 2021). Following this perspective, a highly imbalanced gender share in a central banking committee may – at least sometimes – slow down the process of gathering information on diverse views about monetary policy and therefore may complicate or slow the implementation of monetary policy as well as the introduction of new topics, such as climate change or gender equality, into the agenda.

Secondly, a high gender imbalance in central banking is worrying for ethical reasons. Women offer a diverse pool of talents which aging societies cannot afford to let go to waste. Concerning the COVID-19 pandemic, women were on average more exposed to the virus, from hospitals to nursery homes as well as schools and grocery stores. They were also more likely to be negatively affected by their governments' restrictions to contain the pandemic, notably by the lockdowns, e.g. in terms of balancing their professional and personal life when schools had to close or regarding increasing unemployment rates and the introduction of short-time work. With indirect channels for transmitting information missing, the aggregation of their views and constraints may have been less timely.

For all these reasons, women should be better represented in central banks.

Chart 2

Share of respondents by gender, age group and type of contribution



Source: ECB website, "Key Findings. The ECB Listens Portal".

Note: "CSO responses" refers to responses that were copy-pasted from contributions offered by organizations such as Greenpeace. "Original responses" refers to the remaining responses.

[4] *https://www.banque-france.fr/la-banque-de-france-votre-ecoute.*

This would also contribute positively to their legitimacy in a time when "experts" and "technocrats" are criticized as being too aloof.

3 Why should diversity in central bank governance be promoted?

Promoting gender equality in central banks makes sense from a legal perspective, as it is one of the EU's goals and is written down in national laws. However, there are many more reasons why women should be equally represented, which I want to bring to the discussion.

As already suggested above, the mere existence (and success) of monetary policy committees is to pool knowledge and bring a diversity of views and perspectives to the table. Gender imbalance at the top deprives these bodies of improving the knowledge quality needed to make informed policy decisions, and this may push some given concern to the background. As monetary policy decisions are made after careful deliberation and are based on the votes of the committee, the relative weight given to the various relevant concerns is necessarily a product of the different talents and concerns of the people assembled around the table.

Yet, the impact of gender on the quality of a committee's decision is difficult to measure, as it is hard to objectively tell which decision is linked to gender imbalance or to personal or professional characteristics. Research is also more than scarce on that matter, partly because very few women have been in the position to decide on monetary policy.

However, recent research is insightful for discussions about the issue at stake. In finance, it is now common to find that more diverse boards in terms of gender are associated with better bank performance, better monitoring of bank managers and therefore lower agency costs (Cardillo et al., 2020). There is also a strong positive link between the share of women in senior positions and firms' performance (Christiansen et al., 2016).

In terms of monetary policy outcomes, researchers have mostly wondered whether women had a more dovish stance, i.e. are more in favor of fighting unemployment than inflation – or a more hawkish one, i.e. whether they were more inclined to use the interest rate policy to drive the inflation rate. In a large sample of various countries, Masciandaro, Profeta and Romelli (2020) have found that relatively more gender-balanced central bank boards tend to push monetary policy committees towards setting more hawkish policies. By construction, those results do not control for the mandate assigned to the central banks. Looking at US history, a recent research conducted by the Banque de France has indicated that female FOMC members were mostly on the dovish side, while men were more hawkish (Istrefi, 2019).

But are women intrinsically more dovish or hawkish than men? Not necessarily, as Istrefi and Bordo (2018) have shown. They rather advocate that the three following main factors influenced the FOMC members' approach: 1) the national and global economic situation when they were born – FOMC members born during the Great Depression of the 1930s were more inclined to fight unemployment than those born during the Great Inflation of the 1960s and 1970s; 2) the economic ideology of their alma mater – e.g. having graduated from Chicago University makes it more likely to be hawkish than having graduated from Harvard University; and 3) the political affiliation of the US president who appointed the FOMC members.

Moreover, bringing more diversity to the table is not only an ethical and legal imperative, it also widens the talent pool. To cite Margarita Delgado, Deputy

Governor of the Banco de España, "We cannot let 50% of our talent go to waste." (Arnold and Dombey, 2021).

Communication is de facto an important monetary policy tool, as the use of forward guidance for managing future economic outlooks shows. Given that central banks have to communicate not only with experts but also with the public – meaning men *and women* as well – having women as decisionmakers of monetary policy must be a top priority for central banks.

Central banks will succeed in their attempts to reach out to the wider public if they can connect to, listen to and reach a common understanding with the people, using innovative communication means. For this to happen, central banks need to observe how individuals process and react to information and to the vocabulary used, as both can influence their expectations. If the formation of expectations differs across "types of people", personal history or gender, central banks have to adapt their messages and means of communication accordingly when addressing the public. This will require parity at the decision-making table as well as bringing in more diversity – in general, beyond gender – when collecting information about the general public to be able to take into account all the various economic beliefs and expectations. In return, central bank credibility will be strengthened and the people's trust rebuilt, thus making monetary policy more effective.

Conclusions

This paper starts with an old paradox: The world of decisionmakers is still a man's world. However, it is *women* who are mainly in charge of crucial and vital economic tasks in our societies and in households. Yet, their economic concerns and the way they form expectations differ at first glance from those of men, maybe mostly because of their personal history, level of education or occupations. Now, the question is whether central banks need to take into account and address this issue. They may well, as women may react differently to the way central banks communicate, in turn making it necessary for central banks to adapt their communication accordingly to be more effective at implementing their monetary policy. Yet, it is not only gender per se that matters but the fact that decisions are better informed when diverse point of views are represented around the table, in all and every dimension of diversity. Greater diversity at the top will make the world a better place to live in. And it would be fairer.

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Ana Ivković

Vice Governor

National Bank of Serbia

We must use all our talent and diversity – The case of the National Bank of Serbia

According to statistics, central banking is still a man's job. Yet, in Serbia, the situation is different or to say – much better. In the National Bank of Serbia (NBS), women hold the positions of the Governor and of the Vice Governors, making 75% of the Executive Board. We respect and implement gender equal rights, but, more importantly, equal rights and respect for everyone. Whether you're a woman or a man, the work is the same. What have we learned?

1. Gender is only one of the many dimensions of diversity that we all have to value.
2. Society should not make a simplistic choice between men and women, but we should support each other's best.
3. The world should empower women more, but opportunities should be given to those who have the right knowledge and skills.
4. Society can reach its full potential only, if we are open to diversity and use all talent available. Institutions cannot be at their best if hard working and talented people cannot imagine themselves in senior leader positions.
5. Unequal opportunities lead to lost productivity and growth. Therefore, once equality is achieved, a positive feedback loop that promotes quality will emerge.

1 How does the National Bank of Serbia fare in terms of gender equality?

Statistics say gender inequality exists in the NBS – in favor of women. So, it is an example of a women-dominated central bank:

1. The NBS is headed by she-Governor, Jorgovanka Tabaković, who is our strong leader
2. Women represent 75% of the Executive Board – three out of four Board members are women.
3. Regarding managerial positions, women account for 57%.
4. Women make up 57% of all NBS employees.

If we include global numbers in the equation, a simple conclusion is that the NBS is doing quite well. For comparison purposes, we can use the Gender Balance Index of the Official Monetary and Financial Institutions Forum (OMFIF), which tracks the presence of both women and men in decision-making processes in central banks. The report also covers gender policies in central banks, e.g. regarding the implementation of gender quotas and identifying gender pay gaps – and it is worth reading.

So, what is the message that it is sending us? On the first page of the 2021 report[1] , the first sentence one can read is that "This statistic is a call to action". Although global statistics show a positive development towards more women governors, still only 18 out of 185 central banks covered by the report are headed by women. They account for less than 10%, meaning that just one in ten central banks is headed by a woman. The NBS holds the 12th position on this list, which puts us in the top 7% on a global level. The reason for not being in the top 5 is the above-mentioned gender inequality in favor of women. The Gender Balance Index also finds that in smaller countries women tend to do better in terms of leading positions.

Now, the question is whether gender equality is an issue at all in the NBS. Numbers say that the NBS is a women-led central bank – by the end of this paper, it will be clear why this is the case.

[1] *https://www.omfif.org/wp-content/uploads/2021/03/GBI_2021-2.pdf.*

But first, it is worth to put on paper some of our answers given for OMFIF's Gender Balance Index 2021, explaining the NBS' working environment. We don't have: gender quotas; an executive or a staff member explicitly assigned to matters regarding gender, diversity and inclusion; a policy that ensures that during hiring processes both female and male candidates are selected for an interview; a policy that considers gender when promoting employees to senior management positions; an external organization that assesses our policies or practices concerning gender equality. To sum up: we don't have any of these, and yet, women outnumber men in the NBS.

What are the reasons for such an uncommon gender environment? When hiring and promoting, we are looking at all qualities and skills a candidate offers, as each position should be held by a professional with adequate knowledge. Our colleagues heading the Bank's organizational units are experts with huge experience regardless of their gender. Whether you're a woman or a man, the work is the same. We created a welcoming working environment, and our colleagues have ample opportunities to listen and participate, to present their proposals, to be seen and heard knowing that their inputs matter and count. In other words: the NBS offers fair and equal opportunities to all colleagues who are willing to do their best and to grow together with the institution.

The OMFIF Gender Balance Index also deals with an issue that has been one of the many obstacles for gender equality in general: maternity leave and taking care of families. In this field, the NBS fully follows the Labor Law of the Republic of Serbia, which stipulates a ban on any kind of discrimination, direct or indirect, for reasons of gender, religion, political or other belief and social background, to name a few. The state guarantees a year of paid maternity leave for the first and second child, to which the father is entitled to as well, if the mother is not able to take care of the child due to justified reasons. For the third and fourth child, paid maternity leave is prolonged to two years, which is very important family support. The NBS also provides a one-time financial assistance in case of a childbirth or child adoption. Moreover, it offers working time models of remote working, working from home, flextime, and part-time working. These options are available to both women and men, and they proved to be very helpful, especially for women, to better balance their work and family obligations.

If we broaden the picture and look at statistics at state level, gender is also an issue for the whole country of Serbia, as women make up more than 51% of the population. Its citizens enjoy gender equality guaranteed by the Constitution, which is why we have laws dealing with gender equality and strategies to promote it. Serbia was the first non-EU country that introduced the Gender Equality Index to help Serbian authorities in creating policies which are in line with European standards regarding gender equality – an important step welcomed by the EU. The index measures six areas (health, money, knowledge, work, time and power) and shows a rising trend in women's participation in many areas, especially in the domain of political power as members of the Government and the Parliament.

Serbia has a female Prime Minister, and 10 out of 21 ministers of the Serbian Government are women, making it one of the most gender-balanced governments in the world. They are leading important Ministries, e.g. the ones for Economy; Mining and Energy; Labor, Employment, Veteran and Social Affairs; Human and Minority Rights and Social

Dialogue; Justice; and Environmental Protection. According to Bloomberg, the change in the gender composition of the Serbian Government propels the country "to the brink of the global top 10 for gender equality[2]". Also, the Global Gender Gap Report[3] published by the World Economic Forum in March 2021, which compares gender gaps across four dimensions (economic opportunities, education, health and political leadership), shows that Serbia is ranked as one of the five most-improved countries in the overall index. The report covers 156 countries, and if we look just at Eastern Europe and Central Asia, Serbia holds the second place.

To conclude, it is true that in the NBS women dominate in numbers but not because of gender, but because of the way they do their jobs. Our Governor Jorgovanka Tabaković says that "through generations, a lot has been done to raise social awareness about the fact that there are no special women's rights but the obligation of society and each individual to consistently respect the *basic* human rights".

2 How does gender diversity affect monetary policy decisions?

This question is not easy to answer. Each survey that we have to fill out has at least one question concerning gender – obviously, as gender affects the way we think and therefore determines the decision-making process, right? I believe that a discussion on this topic could have the same title as Alan S. Blinder's and John Morgan's work "Are two heads better than one?". This is a good question, and I believe that there exists consensus that they are. Yet, regarding the question how gender affects monetary policy decisions, the answers and conclusions differ, which is not surprising.

Why? Partly because it is hard to scientifically analyze gender behavior, especially if there are no data series going back long enough. While many authors have studied various factors of decision-making processes in central banks – e.g. the number of committee members, external versus internal members, educational degree and career characteristics – very few of them made comprehensive analyses whether women have different leanings regarding monetary policy objectives than men.

The most common types of policymakers that we found were the following three: inflation-fighting hawks, growth-promoting doves and centrists (who seem to have switched from one type to another). We have analyzed several papers and, as said, found different conclusions. One of them is that central banks with a higher share of women in the board would likely adopt a different approach to tackle inflation than male-dominated ones, as female governors would tend to implement a higher interest rate than their male counterparts would do in their situation.

One possible answer for such correlation is that women tend to be more risk-averse than men. Based on these findings, we could also say that the gender composition of policy committees is even more important in inflation targeting countries. Yet, we also found an analysis implying that women are more on the dovish side than men. Expectedly, authors quite often highlight that the sample size is too small to scientifically verify their results and offer other factors which influence monetary policy

[2] *See Bloomberg's article "Next Serb Government Among Most Gender-Balanced In the World": https://www.bloomberg.com/news/articles/2020-10-25/serbia-to-become-one-of-world-s-most-gender-balanced-governments.*

[3] *https://www.weforum.org/reports/global-gender-gap-report-2021.*

preferences, such as ideology or events that shaped the lives of governors before they joined their respective central banks.

We also came across studies explaining a gender gap in inflation expectations, suggesting that women tend to perceive higher long-run inflation compared to men due to several reasons, such as different, gender-based information-processing or because of the fact that women are more frequently doing the grocery shopping, and grocery price inflation is a more volatile component of inflation.

Some analyses imply that if women care more about social problems, and we believe that they do, this may mean that women are more likely to use monetary tools to fix cyclical macroeconomic problems. The International Monetary Fund (IMF) conducted a gender-related survey among leaders who are economists, and the findings showed significant statistical differences in opinions between men and women economists. The largest gender difference lies in choices between market-based solutions and government intervention. According to this survey, an average female economist is more likely to be in favor of government intervention if the conditions call for such action.

So, there are different presumptions regarding the influence gender has when it comes to choosing between curbing inflation or encouraging growth, when the choice is to be made. But what we have found as a common ground is that when policymakers are formulating monetary policy, it is crucial to include both women and men economists at the table. Why? Women bring new skills to the workplace. They diversify the pool of talents and competences, which increases creativity and innovation. Women are less present in the media, but when they go live, they are more transparent, they have a more empathetic and compassionate style of communication, so people seem to trust women more than men. As the trust channel has become one of the important channels in conducting monetary policy, especially nowadays, this can boost policy credibility.

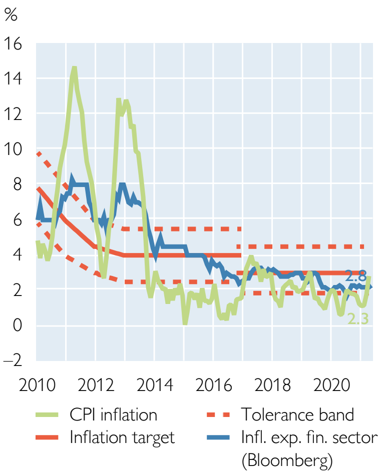
What can we conclude from the Serbian case? We can start with statistics related to the gender issue of the NBS' governors. Within our history of 137 years, the Bank has had 29 governors, only two of them women. The first one was appointed in 2003 and served just seven months. The second one is Madame Jorgovanka Tabaković, now in her second term, nine years so far. The fact that she is the Governor with the longest term in the last 100 years is a confirmation that she is doing a better job than her male colleagues did previously. How?

A decade ago in Serbia, we were analyzing the causes and consequences of the dinar depreciation of 8% annually, and we were addressing the factors of double-digit inflation, an increasing unemployment rate, rising nonperforming loans (NPLs) and much more. At that time, men occupied almost all leading positions in the country. Then in 2012, political changes took place in Serbia. New country leaders brought about a completely positive transformation of the economy. At the very beginning, our Governor Jorgovanka Tabaković recognized where the problems were and started to resolve them decisively. She adopted a new approach to monetary policy, and since then we have achieved much more at much lower expenses. She proved that we *can* have it all: a historically low level of the key policy rate, low inflation and dynamic growth.

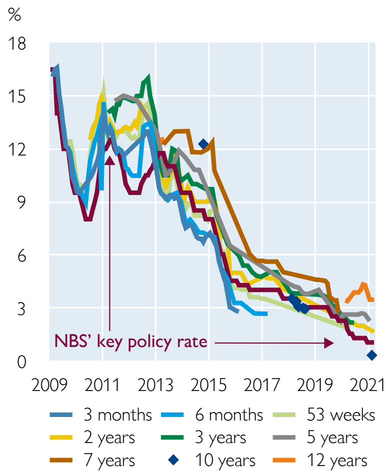
Today, when talking about Serbia, we talk about low inflation, anchored inflation expectations, a relatively stable dinar exchange rate and significantly more favorable financing conditions (see charts). Serbia has a rising

Chart 1

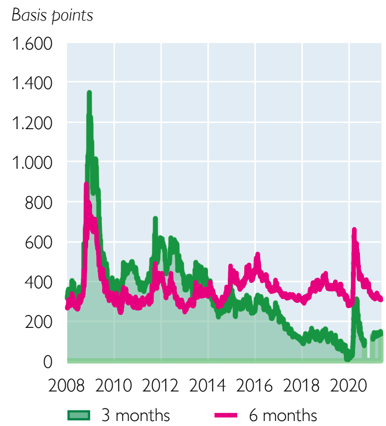
Inflation stabilization



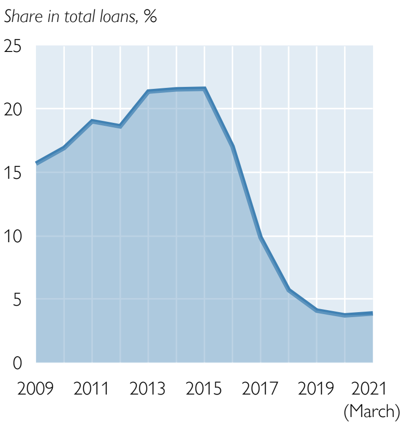
Interest rates on dinar government securities strongly reduced



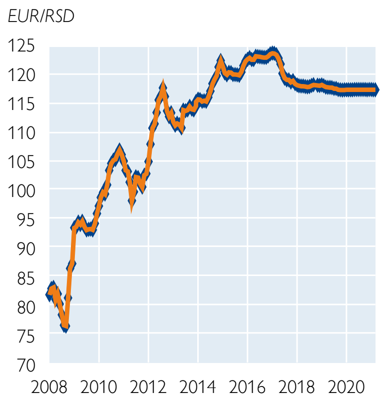
Emerging Market Bond Index (EMBI) for Serbia strongly reduced



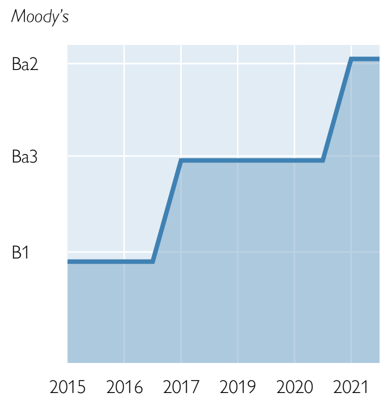
Strong reduction in nonperforming loans



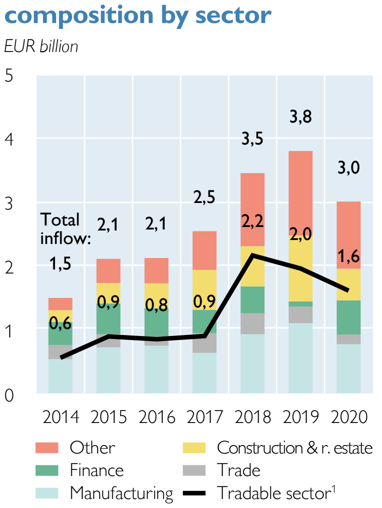
Stabilized dinar exchange rate



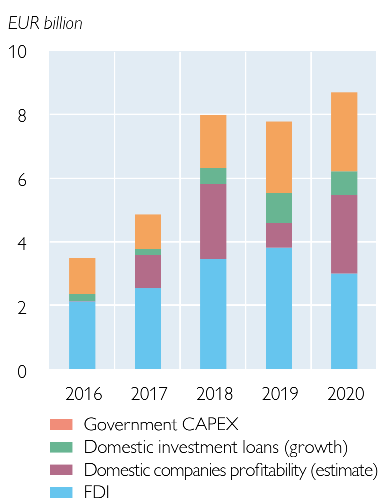
Credit rating to one step to investment grade



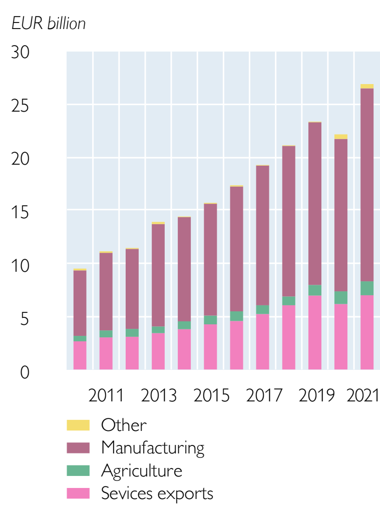
Foreign direct investment composition by sector



Sources of investment financing



Strong export growth



Source: NBS.

[1] *Industry, agriculture, transport & storage, accomodation and food services.*
[2] *NBS' forecast for 2021.*

employment rate, better infrastructure, less regional differences and provides modern services across the country. So, it did not come as a surprise when Jorgovanka Tabaković was awarded as the best World and European Governor of 2020 by The Banker magazine, voted by her colleague governors. They concluded that the stability of the Serbian financial sector as well as the overall success of the Serbian economy is owed a great deal to our Governor's work. They assessed that the resolved legacy of high and volatile inflation, high NPLs, together with improved buffers in terms of foreign exchange reserves are huge drivers of the growing confidence in the Serbian economy. The Banker also concluded that the NBS' most remarkable accomplishments have been achieved with the guidance of Governor Jorgovanka Tabaković.

Also, if we look at the responsibilities of central banks, almost each ensures a safe payment system, but our Governor had a broader vision: the implementation of an instant payment system available 24 hours, 7 days a week, all year round. It is widely used, it is easy to be used and it is 100% safe. Although a sort of consensus exists that jobs in the field of new and modern technologies are more of a man's job, in Serbia this is not the case. Serbia is the right example of how strong and good leadership, and a clear vision can overcome any challenges and bring about a positive transformation of the economy. Today, citizens in Serbia enjoy full monetary and financial stability.

If you ask Governor Jorgovanka Tabaković, she will say that one person alone, no matter how smart and brave she or he is, cannot do the job alone. She is doing her job together with President Aleksandar Vučić, and she believes that people are the greatest assets because it is the people who make decisions and bring prosperity.

3 What are the remaining global challenges?

The United Nation's Sustainable Development Goal 5 "Achieve gender equality and empower all women and girls"[4] set the target that until 2030 the world will strive to achieve women's full and effective participation at all levels of decision-making processes in political, economic and public life. What are some of the obstacles down this road? It starts with the tendency that women focus their studies on lower-paying faculties like social sciences. In some cases, labor regulations limit women's access to jobs as they have a hard time balancing work and household responsibilities, especially if it is hard to find childcare. Additionally, women have less access to finances, as they own less properties in their names – meaning less collateral for loans – and thus getting less opportunities to become entrepreneurs. So, what could be tiny steps to boost women up the career ladder?

1. Organizations can and must do their part, but government policies are crucial too! What can legislators do? They can offer chances, but these chances need to be real – abstract and empty words on paper or quotas are not enough. People need evidence that those chances are real.
2. We must walk the talk. We have seen institutions recognizing the gender issue, but not so much real action. A balanced gender composition is necessary to guarantee diver-

[4] *https://sdgs.un.org/goals/goal5.*

sity, but it's not enough. Institutions have to acknowledge all aspects of equality and implement all they put on paper in good faith.

3. Have confidence in yourself and your skills. Today, it is much easier to balance work and family, as there are many childcare services. In the end, improved access to childcare can help us all, not only women. Again, what can legislators do? They can offer chances, but these chances need to be used too – and we should all use our chances.
4. It is a nation's obligation to do everything to leave no one behind – a principle reflected by the opening line of the UN Charter "We the Peoples", meaning "made by people, for people". Therefore, we should all work as partners to promote basic human rights and to create opportunities.
5. Finally, partly advice, partly a wish: let us have more she-governors and let us have equality – not just regarding gender, but regarding every aspect of our lives. All of us can contribute to achieving this goal by being good role models. Women role models inspire others to envisage the possibility of a successful career in traditionally male-dominated fields. I believe that having a good role model is equally important as sound legal grounds. I have my role model and she once told me that "being a successful and satisfied woman as well as a mother, who demonstrates that it is possible to be both, is the best way to motivate others".

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Women and monetary policies[1]

Despite the progress made in recent decades, the underrepresentation of women in decision-making positions is still a widespread phenomenon. Yet, women's empowerment is a top priority for institutions and firms, not only because of descriptive representation but also because gender balance in decision-making positions may be linked to a different style of leadership and a different agenda. Using a new large dataset for 103 countries over the period between 2002 and 2016, we documented the evolution of female presence in central banks' monetary policy committees and their role in monetary policies. The results show that a higher share of women on central bank boards is associated with a higher interest rate and that women in central banks have a more "hawkish" attitude, i.e. they are more aggressive in fighting inflation.

Keywords: women on boards, central banks, risk aversion

Despite the progress made in recent decades, the underrepresentation of women in decision-making positions is still a widespread phenomenon. According to Catalyst (2020), women represent only 30% of senior management in the European Union and 29% in North America. Among the largest publicly listed companies in the European Union (EU-28) in 2020, only 19.3% of executives and 7.9% of CEOs were women. In the US, there are still nearly 13 companies run by a man for every company run by a woman. In politics, only in 9 countries out of 153 a woman is head of state and only in 13 out of 193 head of government. The global share of women in national parliaments is 25.5% (IPU, 2021).

Yet, women's empowerment is a top priority for institutions and firms. There is not only an issue of descriptive representation but also of substantial representation. In fact, gender balance in decision-making positions may be linked to a different style of leadership and a different agenda (Profeta, 2020).

In business, recent analyses which exploit the introduction of board gender quotas find that the presence of women on boards has positive effects on the selection of board members (male and female), increasing the qualification level of all members (see Ferrari et al., 2021 for the case of Italy). The effects on performance are less conclusive, but most of the rigorous studies seem to suggest a null or positive effect (see Profeta, 2020 for a review). Another important outcome related to the presence of women in decision-making positions is the policy agenda. The presence of women in politics, for example, has been associated with more effectively voicing "women's interests" and influencing policy outcomes (see Hessami and Lopes da Fonseca (2020) for a recent review).

But what about monetary policy? Monetary policy committees of central banks decide monetary policies, which are crucial for the economic situation of a country. The presence of women in these committees has been historically quite limited. However, a small but increasing number of women has risen to the top of central banks in recent times, for example Elvira Nabiulina in Russia, Karnit Flug in Israel, Janet Yellen in the US and Christine Lagarde at the European Central Bank. For most central banks around the world, the main instrument of monetary policy is the

[1] *This policy brief is based on my presentation at the 48th OeNB Economics Conference in cooperation with SUERF and the JVI on the topics of gender, money and finance on May 20 and 21, 2021. The results presented are based on the paper "Do women matter on monetary policy boards?" joint with D. Masciandaro and D. Romelli (see references).*

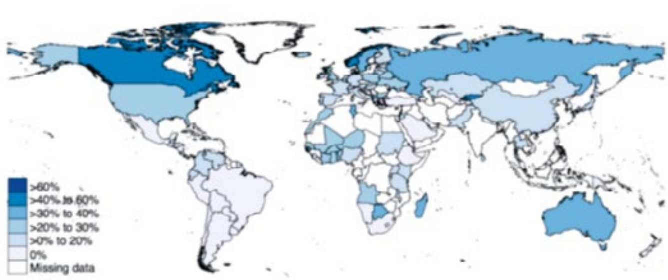
short-term interest rate, at least until the financial crisis of 2008. Central banks make their decisions based on the current interest rate and on the expected deviations of the inflation rate and the output gap. The nature of the decision reduces the endogeneity problem, which typically arises when we assess the relationship between the presence of women in decision-making positions and outcomes. In this context and given the recent trends as well as the relevant impact of monetary policy on the economy, it becomes particularly interesting to investigate the role of women in decision-making positions in the context of monetary policy.

In a recent joint paper with Donato Masciandaro and Davide Romelli (Masciandaro et al., 2020), we construct a new large dataset on the presence of women in central banks' monetary policy committees for 103 countries from 2002 to 2016. This dataset delivers a complete picture of central bank boards' gender compositions (figure 1): the average share of women on monetary policy committees is 14%. The top-performing countries are Canada, Sweden, Serbia and Bulgaria with around 55% to 60% of women. The increase in the share of women during the considered period is substantial: from 11% in 2002 to 16% in 2016. The average size of the board remains at around seven members. Women governors or deputy governors show a similar trend, increasing from 9% to 16%. The largest increase in women board members was found in North America. Middle-East and North Africa improved their quota as well, while Europe, Central Asia and Sub-Sahara Africa experienced a small contraction in women's representation. We also find that central banks with no women on the board saw little change in gender representation over the decade considered. Over the period between 2002 and 2016, 20% of the countries in our sample never appointed a woman to their monetary policy committee, while in any given year around 50% of the countries have no women.

When we used our dataset to investigate the determinants of female presence, we found that a variable which is positively related to the share of women in monetary policy committees is the staff gender ratio reported by the Central Banking Directory from 2016, providing information on the total number of female employees in central banks from 2012 to 2015. It suggests that central banks with overall more women employees have a higher female representation on boards as well. Other variables, including the gender gap

Figure 1

Share of women in monetary policy committees in 2016



Source: Masciandaro et al. (2020).

index by the World Economic Forum, show no connection to the presence of board women members. In other words, the general level of gender inequality in a country seems not to be related to women's representation in central banks.

Then we used our dataset to analyze the relationship between the presence of women on central bank boards and their monetary policy decisions. To isolate the effects of gender heterogeneity on policy decisions, we estimated a forward-looking Taylor rule that relates the target policy rate to deviations of expected inflation and output and augmented it to include the share of women board members and its correlation with the inflation rate. Furthermore, we performed several estimations with different methodologies. Our results show that, for the same level of inflation, a higher share of women on a central bank board is associated with a higher interest rate. In terms of magnitude, an increase of one percentage point in inflation leads to an interest rate that is 30 basis points higher in a central bank with a 50% share of women members compared to the rate with a 10% share of women. This suggests that women in central banks have a more "hawkish" attitude, i.e. they are more aggressive in fighting inflation. In other words, the presence of women in central bank boards can be a signal of prudence when implementing monetary policy actions.[2]

Our results are in line with more general research results on different traits of men and women, which translate into different styles of leadership and actions when making decisions. In other words, women are more risk-averse than men and take more conservative decisions. This result is typically obtained in an experimental setting and applies to the general population. However, it cannot be confirmed entirely considering the highly selected group of women in decision-making positions (see Profeta, 2020 for a review). Still, we provide evidence that women's empowerment does affect the policy, and risk aversion may play a significant role in a context of real decision-making.

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[2] *It is important to note that we are cautious about inferring causality between the gender composition of boards and monetary policy outcomes, since our analysis cannot provide a causal interpretation.*

Rannveig Sigurðardóttir

Deputy Governor

Central Bank of Iceland

Central banks should aim higher to reach gender equality

Gender equality is a topic central bankers should pay greater attention to. In the long term, equality will improve monetary policy through a greater diversity of views and a healthier organizational culture. In general, the central banking world is moving in the right direction but still at a slow pace. Action is needed *now* to pick up the pace.

In her discussion of this year's OMFIF Gender Balance Index, OMFIF Chief Economist Danae Kyriakopoulou mentions that while they knew gender equality was lacking in the central banking world, after they saw the index results, they were surprised to see how little progress had been made. Reading the report makes it clear how much of a man's world central banks still are.

A progressive hiring policy is essential

Even though central banking is in many ways a man's world, we know that institutions benefit from giving a diverse group the opportunity to affect the decision-making process. For this to happen, however, a much more progressive and forward-thinking equal rights policy is needed.

In this context, we clearly need to examine the policies in place in connection with hiring and opportunities for advancement. We must ensure that hiring and advancement are not governed by informal communication channels, which men have generally used to greater effect than women. Coaching or mentorship programs are needed to put young women on a path towards influence in the field. We must also ensure that women have access to the recruiting process and are brought in for interviews. There are paths open for improvement, and we must implement policies to ensure that more women can follow those paths.

Gender equality and the Central Bank of Iceland – Progress has been made, but a proactive approach would speed things up

In terms of gender equality, I often say that the Central Bank of Iceland has been more of a follower than a leader. However, Iceland as a country has generally been a leader in equal rights matters. For twelve years, Iceland has ranked at the top of the World Economic Forum's Global Gender Gap Report, and gender equality has become one of the cornerstones of the national consciousness. Leaps forward in gender equality tend to take place in politics, and the Central Bank then follows by implementing according measures.

The Central Bank of Iceland performs well in the field of gender equality. I became the first female Deputy Governor in the Bank's history, and now, two of the Bank's three deputy governors are women. By the same token, the gender ratio among departmental directors and other executives is more or less equal, and the Bank has made a concerted effort to be a family-friendly as well as equality-friendly workplace. Employees have flexible working hours, and the COVID-19 pandemic has enabled us to experiment with remote working to a greater degree.

Gender equality issues are very much affected by conditions in society at large. For example, if arrangements for pre-school had not changed in the mid-90s and if childbirth leave had not been shared by both parents from 2000 onwards, the progress made in women's labor participation and elevation to positions of authority in Iceland would not have been so rapid. The role of the Central Bank – or any other employer, for that matter – is to work within its own walls to make the most of the possibilities created by these developments. I would like to address in this talk two questions asked in the program for this conference.

The Equal Pay Standard is a tool for progress, but we still need to remain vigilant

The most recent progress was made when the Central Bank of Iceland implemented an Equal Pay Standard, which is one of the latest milestones in legislation on equality in Iceland. Now, all organizations with 25 or more employees are required to implement the Equal Pay Standard and undergo an audit to demonstrate that they offer equal pay for work of equal value.

The purpose of the Equal Pay Standard is to better enforce legislation prohibiting gender-based discrimination. This standard was developed jointly by Icelandic trade unions, employers' confederations and the Government in order to help employers prevent pay discrimination, as adopting a more transparent pay system and re-evaluating jobs should uncover differences in pay offered to men and women for work of equal value.

The Central Bank of Iceland received a formal equal pay certification in 2019. The analysis showed that the gender-based pay gap was just under 2% in favor of men in 2019, down from 3.2% two years earlier. On the other hand, the results of the 2020 pay analysis show that women are paid 1½% more than men. This difference is too small to be statistically significant, and the results therefore indicate that there is no unexplained gender-based pay gap at the Bank.

I believe the Equal Pay Standard is a positive tool – one that will hopefully help us correct the gender bias – but we must remain vigilant to ensure that it is truly an effective tool against gender-based pay gaps and not just a meaningless stamp or a cheaply bought remission of sins.

Central banks should be leaders

We have made good progress at the Bank: the share of women in most key positions during the past decade was between 40% and 55%, and among specialists at the Bank, the gender ratio was close to 50-50 (46% are women).

Central banks are recipients of culture or legislation – as I have demonstrated regarding the Central Bank of Iceland. But the Central Bank of Iceland and other central banks must not confine themselves to being passive recipients. They should act – no later than today – and implement progressive policies with measurable outcomes so that diversity can thrive.

Diversity as a driver of quality, credibility and improved governance

It is generally considered more favorable that policy decisions be made by "committees". Therefore, we have company boards, government cabinets and policy-making bodies such as monetary policy committees (MPCs). For instance, it is usually not desirable that a central bank governor takes monetary policy decisions alone, as these decisions have substantial economic impact. It is also considered wise to increase diversity in such forums – by including external members – to broaden the pool of experience.

Credibility and legitimacy of policy committees

If we agree that multi-member committees are better equipped to take major policy decisions, we must also agree that it is more beneficial if these committees are not too homogeneous in terms of their members' background and experience.

Gender is one of the main dimensions of diversity. Women constitute roughly 50% of the population – even though they still account for a minority of economists. Because we want to mirror society, we need to boost diversity by including women in decision-making and policymaking.

For policy committees, which have been entrusted to take decisions "for others" or "on behalf of others", it is vital that the public be convinced that the committee was appointed appropriately. This is important for the credibility of the committee and its decisions, which in turn is essential if monetary policy is to have the credibility it needs to be successful. The legitimacy of any committee and its decisions lies in gathering knowledge, exchanging opinions and going through the process of deliberating and arriving at decisions.

Do women tend to be doves or hawks? Or both?

But does the inclusion of women affect committees' decisions or policy orientation? That question has been debated.

My take on this is that in terms of voting behavior, research results are inconsistent across literature. Some studies show that women are more likely to be doves, some show that they are more likely to be policy hawks, and still others show no quantifiable impact on a committee's policy orientation.

Interestingly, however, the latest research finds that having more women on the Federal Open Market Committee (FOMC) has positive effects other than the easily measurable outcome, as there seems to be a direct link between gender diversity and the quality of the committee's work. Greater gender diversity is associated with a larger number of topics addressed in the discourse and in the length of discussion. In other words, bringing a diverse group of people into the decision-making process is important for the committee's quality of work, its legitimacy and its credibility.

These findings are also in line with what is shown in studies on gender balance and corporate leadership. They indicate that the association between board gender diversity and firms' financial performance is inconclusive, with studies yielding conflicting findings. On the other hand, studies indicate that gender diversity brings a broader mix of knowledge and background, which enriches the conversation in the board room, and improves governance and strategy on social and environmental issues.

This tells us that when assessing the impact of a better gender balance, we should not confine ourselves to measuring quantifiable outcomes such as voting patterns in MPCs or the financial performance of corporations, as the effects of more balanced committees may lie beneath the surface – in the depth and breadth of the thinking, underlying policy decisions.

My findings within the Icelandic MPC

These findings fit well with my own informal study of the Monetary Policy Committee of the Central Bank of Iceland.

Iceland's MPC has been in operation for twelve years and has five members. Of the nine members that have served to date, three have been women – most often, only one woman at a time. It is obvious that Iceland's MPC provides too few observations to enable a scientific estimate, but I cannot see that the women who sit on the committee or have done so in the past have diverged from their male colleagues in their decisions.

Conclusion

Women need to be represented on MPCs. But they do not need to have different opinions from men to justify their presence there. We need women to be there as role models, we need diversity to enrich the conversation and improve the decision-making process, and we need greater diversity to ensure committees' credibility.

Session 3:

Gender and risk taking: implications for financial firms and regulation

Karin Turner-Hrdlicka
Director of the Department for the Supervision of Significant Institutions
Oesterreichische Nationalbank

Introductory remarks on Session 3

Good afternoon!

I warmly welcome you to the second day of our conference on gender, money and finance. Today, we will continue with Session 3, and I am pleased to reflect with women from academia and in management functions on the question whether risk-taking is gender-specific and, if so, what lessons we can draw.

My name is Karin Turner-Hrdlicka, I am Director of the Department for the Supervision of Significant Institutions at the Oesterreichische Nationalbank, and I am honored to be the moderator of this session.

In this session, we have the advantage of having not only four but even five distinguished speakers, and I already mentioned that the academic and management perspective is represented in our panel; but we also represent different cultural and geographical backgrounds, and we will cover time zones from the United States to Saudi Arabia. So, I can promise you a very exciting afternoon!

Gender and risk-taking – often, in economic literature, one can read general statements in the sense that men are more willing to take financial risks than women, or in other words: that women are more risk-averse than men.

We already had a teaser on these aspects in yesterday's discussion when reference was made to the Lehman Sisters debate and thus to the question whether the financial crisis would not have happened in the same way if there had been women as decision-makers at Lehman Brothers. There is also research from the IMF showing that a higher proportion of women on the boards of banks and financial supervision agencies is associated with greater stability.

Moreover, the MSCI Europe Women's Leadership Index – representing companies leading in terms of female representation in management positions – outperforms the standard MSCI Europe Index. What is the explanation for this?

And finally, in some studies, it is also argued that women are more likely to invest in sustainable and social areas – and we all know that the issue of sustainability, particularly the aspect of green finance, currently receives rapt attention from policymakers.

At the same time, all data show that women are still substantially underrepresented in the financial world, especially when it comes to leading positions – which I can only confirm from my own experience.

So, the questions we would like to address in this panel today are:

1. Is there a gender difference with regard to risk-taking, by nature, by average or not at all? And is this just a stereotype or the result of selection effects?
2. Would a better gender mix affect financial firms' decision-making, risk behavior and social responsibility?
3. What are gender-specific obstacles for women to attain leading positions in financial firms? How may they be overcome?

I hope you are as excited as I am to hear the answers to these questions and the discussion about them. Thank you all for attending the conference and enjoy this session!

Julie A. Nelson
Professor Emerita of Economics
University of Massachusetts Boston, USA

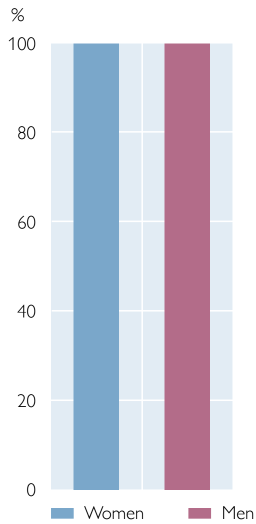
The truth about "gender differences" in risk-taking

Executive summary

- *"Is risk behavior gender-specific?" No.* I conducted meta-analyses of over fifty empirical studies of gender and financial risk and found the connection between sex and risk preferences to be extremely weak. Any difference *between* the average man and the average woman is always trivial in comparison to the differences *among* men, and *among* women. Men and women are far more similar than different.
- *"Would a balanced gender mix in policy institutions make for better decisions?" Yes.* Even though women don't "bring something different," discarding the common association of economics and finance with "macho" traits would allow a more comprehensive set of human traits and interests to be appreciated by all leaders.

Chart 1

Categorical difference



Source: Author's illustration.

Full presentation

I would like to address in this talk two questions asked in the program for this conference:

- "Is risk behavior gender-specific?"
- "Would a balanced gender mix in policy institutions make for better decisions?"

Let's start with the first one. The idea of "gender-specific" behavior suggests something like what is illustrated in chart 1, where the horizontal axis measures scores on some behavioral variable. That is, all women do things one way, and all men do things a different way. The difference is categorical.

I am an economist, and several years ago, I became curious about the many scholarly articles coming out of the field of Behavioral Economics that claimed to find that "women are more risk-averse than men." While I am skeptical of any assertion that sounds like it may be just a stereotype, I am also an empirical researcher and respect what the data actually reveals. So, I went back to this literature to investigate the data and analyses behind up these claims. I did two meta-analyses (that is studies of others' studies) of the gender and risk literature and published these in scholarly journals as well as in a book (see reference list). Some of the studies I looked at gathered data through survey questions, others through experimental methods and a few through analysis of actual investment data.

The actual *data-derived* results in all these articles are far more accurately summarized by the following statement:

In our *sample*, we (maybe) found a *statistically significant difference in mean* risk aversion between men and women, with women *on average* being more risk averse. I've italicized a few important words:

- *Sample:* The fact that researchers were only looking at a sample means that whatever they find is really only generalizable to the particular group they took their sample from. Often, this was undergraduate students in the researcher's home country. So, generalization to "men" and "women" always and everywhere is already suspect.

- *Statistically significant:* Contrary to how this sounds, this does *not* mean that the effect (in this case, of gender on risk-taking) is large or important. It only means that the effect is statistically *detectable* (that is, it is relatively unlikely that the results could have come from a population in which the effect was absent, purely by chance). While it is true that the larger the real effect is, the more likely the results are to be statistically significant, it is also true that the larger the *sample* is, the more likely is a statistically significant result. So, a result can be "statistically significant" even if the real effect is trivially small.
- *Difference in mean…on average:* The difference being compared here is the difference between the *average* man and the *average* woman, not all men and all women. But behavior also generally varies *among* women, and *among* men – perhaps to a much greater degree than *between* the sexes.

While a difference between *all* men and *all* women would look like chart 1, differences between men and women in actuality usually look a lot more like chart 2. The left side shows a stylized representation of the distributions of men's and women's heights. We know, just from looking around, that men are on average taller than women. This is reflected by the male mean ($\bar{X}_m$) being to the right of the female mean ($\bar{X}_f$). Most people are close to average, so the distributions reach their greatest heights at their means. Yet, some individual women are quite tall – taller than some men – as illustrated by the fact that there is a long "tail" of the blue line going off to the right. And some men are quite short. Once in a while, if you randomly paired up a man and a woman, you would end up with a woman who is taller than the man. One way of expressing how big the difference between the *average* man and woman is, *relative to* how much men differ from other men, and women differ from other women, is to use a measure called *Cohen's d*. This represents the number of standard deviations between the two means. For heights, d ≈ 2.60.

Chart 2

"On average" difference

Source: Author's illustration.

The right side in chart 2 illustrates a smaller "on average" difference of only $d \approx 0.35$. In this case, if you randomly paired a man and a woman, you would be nearly as likely to find the woman scoring higher than the man, as the man scoring higher than the woman.

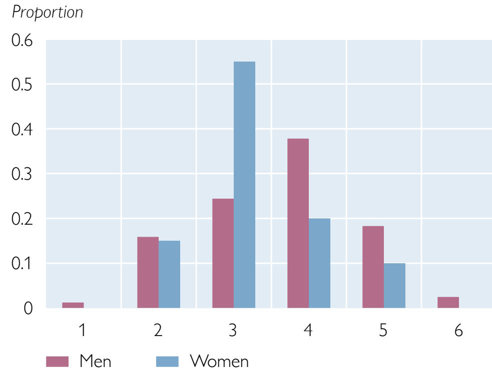
So, if the horizontal axis was measuring the tendency to take risks, and the distributions looked like the right side in chart 2, what could you say about the risk-taking tendencies of *an individual person*? Perhaps, say, this person is being considered for appointment to a policy-making board, and all you know about them is their sex. The answer is, "Basically, nothing." He or she could be from anywhere in their respective distribution and could therefore be either more or less risk-taking than a candidate of the other sex. Looking only at group averages can be misleading.

In my meta-analysis of over 50 studies of gender and risk, I found that the most precise estimates of the "on average" difference between men and women on risk-taking measures are *even smaller* than that shown in the right side of chart 2, at about $d \approx 0.13$. While this difference is of trivial *substantive* significance, such small differences can be statistically detectable in very large samples. Some of the actual values for d that I found in my first meta-analysis are shown in a table in the Appendix.

Psychologists call the fact that we humans often only see the part of reality that supports our pre-existing beliefs "confirmation bias." I found many cases of this in my meta-analyses. For example, one article surveyed samples of investment managers in four different countries. The data from one of these countries is shown in chart 3. We can see, even with a relatively large d value of 0.40, that the degree of overlap and similarity is high. Furthermore, this was the *only* country, out of the four, in which a difference was statistically detectable. Yet, the article claimed "a victory for gender difference" and suggested that female investors be paired with female investment advisors because of women's (supposedly) distinct investment style. The results from other three countries and the fact that the distributions overlap, which tell quite a different story, were ignored.

Chart 3

Example of data from one study



Source: Nelson (2015) based on data from Beckmann and Menkhoff (2008).
Note: Risk choice: 1 = very risk averse, 6 = little risk averse.

"Publication bias" also adds to public misperceptions, since findings of "we found *no* reliable evidence for difference" (that is, no statistically significant effect) have tended to be considered "not publishable" in scholarly journals.

So, *is risk behavior gender-specific?* The answer is a very clear *NO*. The case shown in chart 1 above (or even the one on the left side of chart 2) is soundly *contradicted by* the data. Men and women are far more similar than different.

On to the next question: *would a balanced gender mix in policy institution make for better decisions?* My answer to this question – it may surprise you – is *YES*. But this is *not* because individual women "bring something different" in regard to risk-taking to leadership groups. They do not.

However, psychological studies (as well as common observation) have shown that we tend to think of many things which don't "have" a male or female gender themselves in gendered terms. In Western cultures, for example, we tend to think of dogs as somehow more "masculine" and cats as more "feminine." More to the point, we have cognitively associated the fields of finance and economics with markets, risk-taking, innovation, achievement, efficiency and competition. We are (currently) far more hesitant to realize that financial and economic systems are also about – and part of – social relations. Or that caution, trustworthiness, resilience and cooperation are also absolutely necessary for them to be healthy and sustainable. What are the gender connotations of these lists? Clearly, finance has been thought of as a realm suited for "real (risk-taking etc.) men," and as not really in need of caution and care, which are culturally stereotyped as "womanly."

Could we discard *both* the social-level bias against women entering the sphere of financial leadership *and* the cognitive (gendered) bias about what the financial sector really needs? Then we could get to a "balanced gender mix," not only of women and men but of caution (to balance risk-taking), trustworthiness (to balance innovation), resilience (to balance efficiency) and cooperation (to balance competition). That would make for a safer and more society-serving financial sector, without needing to appeal to any spurious "gender differences in risk-taking." We could allow *all* these dimensions to be appreciated by *all* financial leaders. We could, furthermore, allow all these dimensions to be *enacted* by all financial leaders.

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Appendix

Table 1

Some results from one meta-analysis

Author(s)	*Cohen's d*	Index of Similarity
Harris, Jenkins et al., 2006	–.34 to NSS to .74	—
Fehr-Duda, De Gennaro et al., 2006	–.25 to NSS to .49	—
Arano et al., 2010	NSS	—
Gneezy Leonard et al., 2009	NSS	—
Bernasek and Shwiff, 2001	NSS	.87
Lindquist and Save-Soderbergh, 2011	NSS	—
Holt and Laury, 2002	NSS to .37	.83 to .86
Booth and Nolen, 2012	NSS to .38	.84
Beckmann and Menkhoff, 2008	NSS to .46	.67 to .91
Dohmen, Falk et al., 2011	NSS to .48	.80 to .88
Meier-Pesti and Penz, 2008	NSS to .85	—
Powell and Ansic, 1997	.06 to .17	.90 to .93
Sunden and Surette, 1998	.08 to .16	.95 to .96
Barber and Odean, 2001	.09 to .26	—
Eriksson and Simpson, 2010	.19 to .22	.89 to .91
Hartog, Ferrer-i-Carbonell et al., 2002	.22 to .29	.85 to .96
Borghans, Golsteyn et al., 2009	.32 to .55	—
Eckel and Grossman, 2008	.55 to 1.13	.60 to .80

Source: Nelson (2014).

Notes: Articles are identified by author and date. A negative value for Cohen's d indicates that women, on average, took more risks than men. "NSS" means that the study included some results that were "not statistically significant." The "Index of Similarity" measures the proportion of overlap between men's and women's distributions, for the cases in which this can be unambiguously determined. The "most precise" estimates are those from samples of the largest size (not indicated here).

Session 4:

Gender, financial literacy, inflation and COVID-19

Petia Niederländer
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Introductory remarks on Session 4

Ladies and gentlemen, welcome to the fourth session of the 48th OeNB Economics Conference on gender, money and finance.

Among policymakers responsible for promoting financial literacy, the impact financial education can have on building personal resilience in times of crisis, like the COVID-19 pandemic, and how gender correlates with it have been under debate for some time now. As a result, the question arose: is the perception of the economic reality gender-specific? And if so, which measures can policymakers take to improve the knowledge and skillset of the population from all walks of life for handling their finances sustainably.

Recent studies show that women are more vulnerable to crises than men, since they tend to have less savings to rely on. Further implications are social expectations regarding the role women ought to fulfil in society and certain long-term obligations like caregiving in families, not only during crises. However, their financial well-being can help build up the resilience of a society as a whole and thus should not be left ignored.

The COVID-19 pandemic led to an increase in savings but to a decrease in investments and stock market participation, further widening the existing gender gap. However, gender-related confidence issues also play a key role in this development and should be addressed as well. Consequently, the need for a comprehensive financial education plan grows, and a national strategy can be a promising approach to secure financial resilience and stability.

From a central bank perspective, this is an essential topic to discuss. In times of unconventional monetary policy, it is especially important to get across to the people that price stability is a goal for the public good and can only be achieved as well as sustained if the underlying economic measures are well understood. Furthermore, the perception of the economic reality impacts how people exercise their democratic rights. More confident citizens are more active, they tend to participate in elections and other democratic processes, which especially applies to younger people.

The panelists of Session 4 will address the questions whether women overestimate economic risks, like inflation or the repercussions of the COVID-19 pandemic, and how this might influence their financial behavior and well-being. They will argue that women may not lack financial knowledge but rather confidence when making financial decisions.

Thus, financial education ought to be tailored to specific needs and be part of a bigger context going beyond school. Examples of programs for young adults at work or for elderly people out of the workforce across the globe emphasize the importance of adequate training at different stages of life.

Ideally, a national strategy creates a culture of financial literacy spanning over gender, age and time, bringing people together. Not only recipients of financial education should step up, but also providers can improve by pooling their efforts, re-evaluating their methods and offering structured access to resources of knowledge and training.

A dialogue between all stakeholders – which involves the public sector as well as the private sector – can be the source of inspiration from various areas and bring constructive ideas to the "financial literacy table".

The main message of this discourse is to have an extensive and systematic view on financial education; to start teaching and life-long learning early; to encourage confidence for taking financial choices and handling one's finances independently; to engage the people's interest in economics; and support female networks as well as women in general.

Sylvia Kritzinger
Professor
University of Vienna

A persistent knowledge gap? Political literacy from a gender perspective

Previous research on financial knowledge has shown that a knowledge gap between men and women exists.[1] In this essay, I extend this notion to other areas, namely political knowledge, and ask whether a more general knowledge gap between the genders exists in society. As with financial literacy, research in political science has consistently shown that political literacy is unequally distributed between men and women.[2] In sum, women seem to know consistently less about politics than men.

From a democratic perspective, this issue is problematic for two reasons. First, the more a person knows about politics, the more likely s/he participates in politics. Hence, political literacy is an important factor for political participation, which can be divided into conventional and unconventional political participation. The former includes voter turnout and the latter participation forms such as joining demonstrations, signing petitions and "buycotting", which means to deliberately decide against buying certain products out of political beliefs. To sum up, with women knowing less about politics than men, as a result, they also participate less in politics than men.

Second, political knowledge is also of importance with regard to vote choice. A well-established concept in political science is economic voting. It means that voters consider their country's current economic situation when casting their vote. In other words, is the economy doing well, the government is doing well too in the eyes of the voters, who then "reward" their government party or parties by voting for them. In the opposite case, if the economy is doing badly, the voters want to "punish" the government and "throw the rascals out". Therefore, economic voting can be used as a tool to – at least to a certain degree – hold governments accountable. However, to be able to form an opinion about whether the government should be rewarded or punished for its past actions, voters need to know about its performance in general and its economic performance in particular. Thus, a gender gap in political knowledge might distort the accountability mechanisms available to both female and male voters.

Considering the aspects of turnout and vote choice, two central electoral skills in liberal democracy, the fact that women know less about politics poses a major problem, as they not only participate less in democratic processes but also with a different level of knowledge quality.

But what exactly is this knowledge gap literature talks about and how can it be explained? There are some "traditional" explanations for this gender gap.[3] The first set of explanations focuses on social norms.For one, parenting and caring activities hamper women's possibility to become and stay politically informed or to participate actively in political actions. For another, social norms determine the roles women ought to fulfil in society – and which not. For example, having active roles in politics is still primarily attributed to men, not to women. Data from the European Values Study 2018 for Austria reveal that many Austrians still share this sentiment.

Chart 1 shows some social norms concerning women and their roles in

[1] *See also other contributions to this conference.*

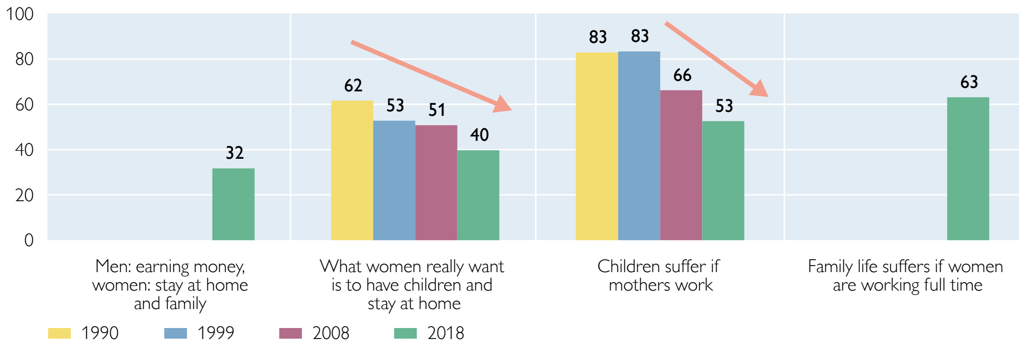
[2] *For instance, see Fraile, M. 2014. Do women know less about politics than men? The gender gap in political knowledge in Europe. Social Politics 21. 261–289.*

[3] *For an overview, see Fraile, M. and R. Gomez. 2017. Bridging the enduring gender gap in political interest in Europe: The relevance of promoting gender equality. European Journal of Political Research, 56: 601–618.*

Chart 1

Gender roles

4-point scale: fully agree/agree



Source: EVS 1990–2018.

society. Even though these social norms weakened over time (between 1990 and 2018), they are still very dominant. Women are still considered to be mainly responsible for the household and the family as well as many other activities that these two responsibilities entail.

Also, it is more likely that women face socio-economic disadvantages than men – a factor that is generally connected to lower political participation, independently of gender. In other words, persons with fewer resources are less politically educated.

Moreover, some methodological issues might explain the well-observed gender gap in political knowledge. Several researchers claim that the way political knowledge is measured disadvantages women.[4] As mentioned above, women have diverse life experiences, which influence what kind of knowledge they acquire (and to what extent). In other words, their different life experiences lead to different political knowledge patterns than those of men. However, the majority of knowledge questions ignores gender-specific differences in life experiences, assessing political knowledge as factual knowledge with biased questions in favor of men's political views and interests. In other words, the topics commonly chosen for the surveys' questions might be the reason for the notion that a gap in political knowledge between the genders exists. However, if a different approach were adapted, a gender gap might not even be observed.

Connected with the issue of measurement, gender differences may also be the result of gender-specific "guessing behavior". Overall, men are more prone to guessing when they do not know the answer for sure, while women are more likely to admit that they do not know the answer, opting for the "Don't know" response option in surveys. Also, women would rather choose the "Don't know" response option if they are not 100% sure (thus "hiding" their knowledge), while men are more "adventurous" and dare to guess.[5] Possibilities to overcome this problem are either to not provide a "Don't know" option or to ask respondents as a follow-up question how confident they were about the answers they had given.

[4] *For an overview, see Ferrín, M., M. Fraile and G. García-Albacete. 2017. The Gender Gap in Political Knowledge: Is It All About Guessing? An Experimental Approach. International Journal of Public Opinion Research, 29: 111–132.*

[5] *See, for instance, Mondak, J. J. 2001. Developing valid knowledge scales. American Journal of Political Science, 45: 224–238.*

These gender differences in political knowledge can also be observed among young adults aged 16 to 20. In the context of the Austrian National Election Study (AUTNES), young adults were asked several factual political knowledge questions, with the result that no gender differences could be observed. Whether male or female, young adults showed about the same level of political knowledge. However, a follow-up question about *how much they think* they know about politics in general reveals a gender gap: the questioned women thought to have much less knowledge about politics than the male respondents, even though the results of the questions proof that this is not the case – a clear indication of lower confidence among women with regard to their skills and competences.

These various research findings show that a persistent knowledge gap between the genders seems to exist – with several repercussions on democratic processes as outlined before. So, what to do?

As mentioned before, to a certain extent the general knowledge gap seems to be rooted in women being less confident about their political skills. Thus, it is questionable whether closing the gender gap can be accomplished by simply providing more (factual) information. It rather seems more fruitful to not only raise awareness of this confidence issue but to also boost women's confidence. Furthermore, we need to reconsider our approach to collecting data on political knowledge through surveys, experiments, discourses, etc. Also, when assessing factual knowledge, we need to take into consideration the different life experiences that women and men gain over time and the fact that these influence an individual's political knowledge. With this in mind, deliberation processes may help shed light on how women perceive and evaluate politics, which in turn could lead to new ways on how we get women to better engage in politics and to contribute to political debates with more confidence.[6]

More long-term projects also need to be considered. For one, more investments in gender-friendly socialization about politics during childhood – especially in schools – need to be made to somehow weaken the impact of the traditional views and norms on young girls. As Fraile and Gomez (2017) have shown, promoting gender equality is vital in this regard, and thus citizenship education focusing on these aspects needs to be fostered from an early age on. For another, the socio-economic disadvantages affecting women in particular need to be substantially reduced, with the potential positive impact of also reducing the knowledge gap between the genders.

All these programs are needed for "fearless women" to evolve. Reducing the general knowledge gap is vital in liberal democracies to provide across the genders the same opportunities to participate and engage in political life – and thus to fulfill one of the main principles of liberal democracy: equality.

[6] *See also Fraile, M. 2014. Does deliberation contribute to a decrease of the gender gap in knowledge? European Union Politics, 15: 372–388*

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Women's financial wellness and literacy

COVID-19 and its economic consequences have negatively affected the financial well-being of many Americans and further exacerbated pre-existing gaps among US adults. Women and historically underrepresented minorities are at particular risk in this sense.

Prior to COVID-19, women were already facing greater economic challenges than men. Our data collected in January 2020, immediately before the onset of COVID-19, shows that women were already lagging men in terms of financial literacy and financial wellness.

A more refined understanding of financial literacy among women, including areas of strength and weakness and variations among subgroups, can inform initiatives to improve financial wellness, particularly as the US moves forward from the pandemic and its economic consequences. While not a cure-all, increased financial literacy can lead to improved financial capability and practices that benefit even those with relatively modest resources.

The P-Fin Index

The TIAA Institute-GFLEC[1] Personal Finance Index (P-Fin Index) is a long-term project that begun in 2017 to annually assess financial literacy among the US adult population. It relates to common financial situations that individuals face in their daily life and can be viewed as a gauge of "working knowledge." The P-Fin Index is unique in its capacity to produce a robust measure of overall personal finance knowledge and a nuanced analysis of knowledge across eight areas of personal finance in which individuals inherently function. The index is based on the responses to 28 questions, with three or four questions for each functional area (earning, consuming, saving, investing, borrowing/managing debt, insuring, comprehending risk, go-to information sources). The online survey is fielded each January on a representative sample of US adults; the 2020 sample consisted of 1,008 individuals. At the same time, the survey is also fielded with a separate oversample of a particular demographic group to provide a more detailed analysis of that group; 1,000 women were oversampled in 2020.

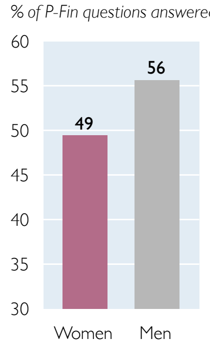
Women's financial literacy

Financial literacy is disturbingly low among US women. On average, female adults correctly answered 49% of the 2020 P-Fin Index questions. In other words, women answered fewer than 14 out of 28 questions correctly. There also exists a significant gender gap, with men correctly answering 56% of the P-Fin Index questions (chart 1). Further, the distribution of correctly answered P-Fin questions is concerning: only 48% of women correctly answered over one-half of the index questions, with 21% demonstrating a relatively low level of financial literacy, i.e. they correctly answered only up to seven out

Chart 1

Gender gap in financial literacy

% of P-Fin questions answered correctly

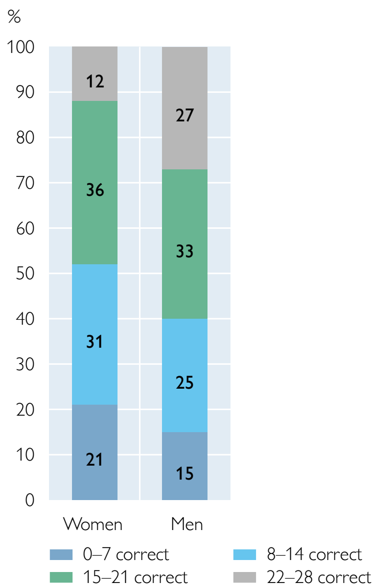


Source: Authors' calculations using the 2020 TIAA Institute-GFLEC Personal Finance Index.

[1] *TIAA = Teachers Insurance and Annuity Association of America. GFLEC = Global Financial Literacy Excellence Center.*

Chart 2

Distribution of correct answers to P-Fin questions



Source: Authors' calculations using the 2020 TIAA Institute-GFLEC Personal Finance Index.

of the 28 index questions. In comparison, 60% of men correctly answered over one-half of the index questions, with only 15% answering seven questions or less correctly (chart 2).

Knowledge across functional areas

Across the eight functional areas, comprehending risk and uncertainty is the area of lowest financial literacy among women. On average, women correctly answered only 34% of these questions (chart 3). The COVID-19 pandemic has greatly amplified the degree of risk and uncertainty in the economy along multiple dimensions, such as employment, earnings, investment returns and expenses. Low financial literacy, especially with regard to risk and uncertainty, means that individuals are particularly ill-positioned to make appropriate financial decisions in this environment.

Borrowing and debt management is the area of greatest personal finance knowledge among women, with 61% of these questions answered correctly, on average. Debt tends to be a feature of personal finance common across the lifecycle for many individuals in the US; knowledge and understanding may emerge from confronting accumulated debt, often from the early stages of adulthood.

Apart from debt, only up to approximately one-half of the questions in the other functional areas are answered correctly, revealing a low level of knowledge in important areas of financial decision making among women. Further, the gender gap in financial literacy continues to hold in terms of functional knowledge. Women's financial literacy lags that of men in each functional area. The differential is particularly large in the realm of investing – 13 percentage points (chart 3).

Heterogeneity among women

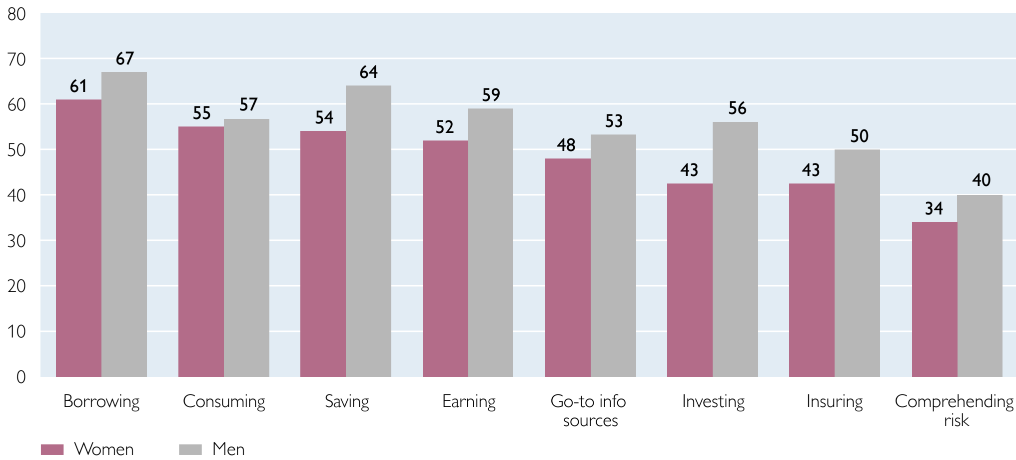
Financial literacy among women varies across socioeconomic and demographic groups (chart 4):

- Financial literacy tends to be lowest among Gen Z women and highest among Gen X and baby boomers. While generation and age effects cannot be distinguished in a single cross-section of data, these findings stand out for how little young women seem to know, given the complexity of today's financial environment.
- Personal finance knowledge tends to be lower among underrepresented minority women – Black and Hispanic women – compared with their White peers. The former correctly answered 38% of the index questions, on average, and the latter 54%.
- Financial literacy tends to be greater among women with higher household incomes. There is a 25 percentage point difference in P-Fin Index questions answered correctly between women with household incomes below

Chart 3

Financial literacy across 8 functional areas

% of P-Fin questions answered correctly



Source: Authors' calculations using the 2020 TIAA Institute-GFLEC Personal Finance Index.

USD 25,000 and those with household incomes of USD 100,000 or more.

- Personal finance knowledge varies with employment status. In particular, unemployed or disabled women have markedly lower financial literacy than those who are employed and those retired.
- Women with a college degree correctly answered 61% of the P-Fin Index questions, on average, compared with 26% among those with less than a high school degree.
- There is a 13 percentage point difference in the percentage of index questions answered correctly between women who have participated in a financial education class or program and those who have not.

Financial wellness among women

Achieving financial security, or financial well-being, is a goal shared across individuals. An increased employer focus on employee financial well-being has manifested itself in workplace financial wellness programs. These programs are more holistic than predecessor programs, which typically focused on a single aspect of personal finances, e.g. saving for retirement or investing in retirement accounts. The P-Fin survey is well suited to examine the state of financial wellbeing in the US, as it contains questions indicative of financial wellness – either outcomes linked to financial well-being or behaviors that should promote it. For example, we have questions covering money management with a particular focus on debt, the capacity to cope with a USD 2,000 financial shock, the ability to make ends meet, and planning and saving for retirement. For each indicator of financial wellness in the P-Fin Index survey, there is a significant gap between underrepresented minority women and their White peers (chart 5).

- One-half of Black and Hispanic women can readily make ends meet in a typical month compared with 70% of White women.
- About only one-quarter of Black and Hispanic women do not feel debt constrained compared with 56% of White women.
- Fewer Black and Hispanic women can deal with an unexpected financial emergency. Specifically, 55% of underrepresented minority women could likely come up with USD 2,000 within

30 days to cover an unexpected need, compared with 77% of White women.
- Less than one-half of non-retired Black and Hispanic women (43%) save for retirement on a regular basis, and among the same group, only 15% are planning for their retirement.

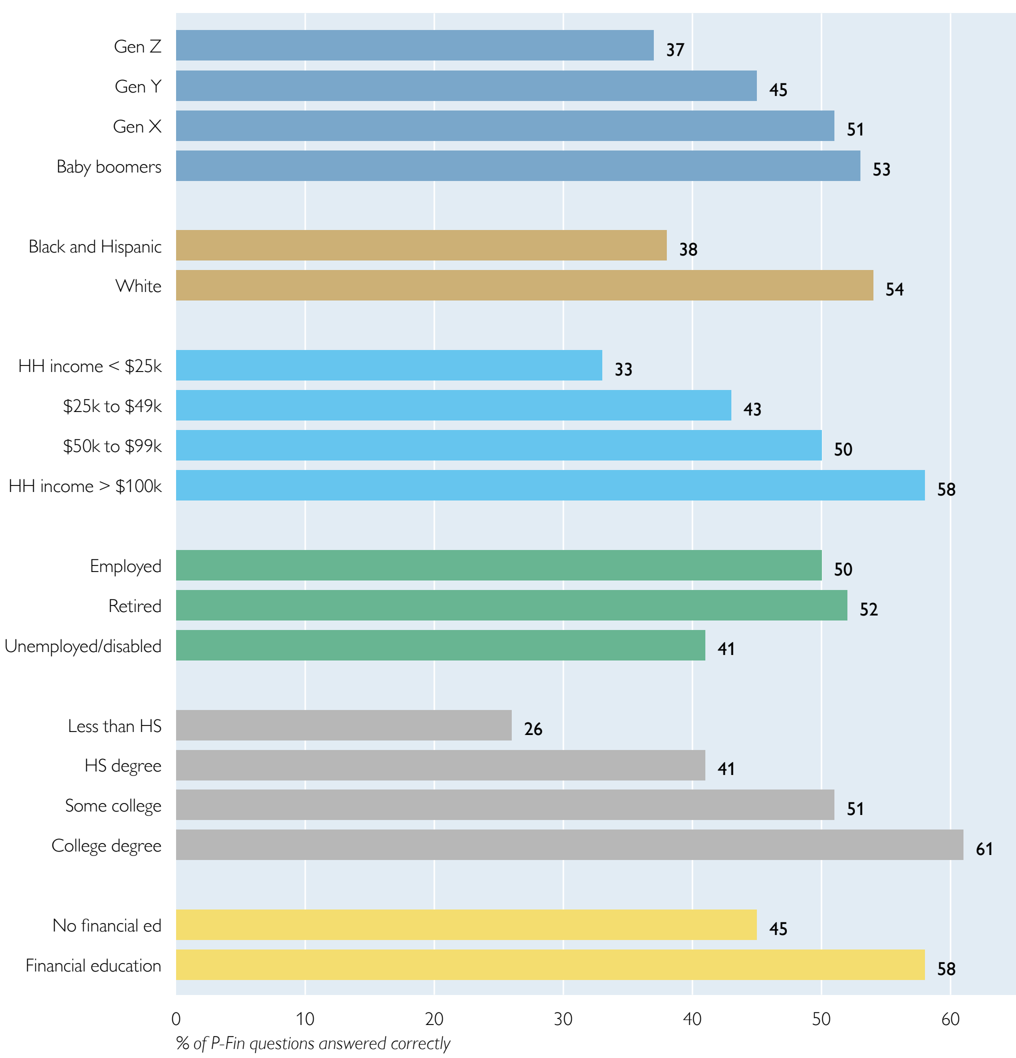
Noteworthy is that this was measured in January 2020, during a time of economic expansion and record-low unemployment rates.

Link between financial wellness and financial literacy

The P-Fin Index data shows that financial wellness tends to be greater among US adults with higher levels of financial literacy. This implies that those with greater financial literacy are better positioned along various dimensions to weather adverse economic conditions such as those that exist today.

Chart 4

Variation in financial literacy among women

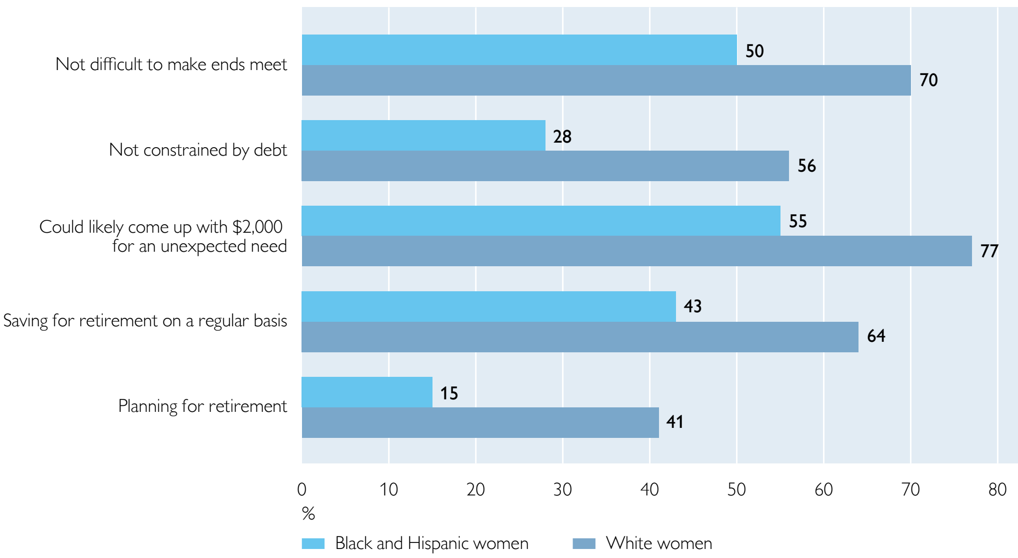


Source: Authors' calculations using the 2020 TIAA Institute-GFLEC Personal Finance Index.

Note: HH = household, HS = high school, ed = education.

Chart 5

Financial wellness among women

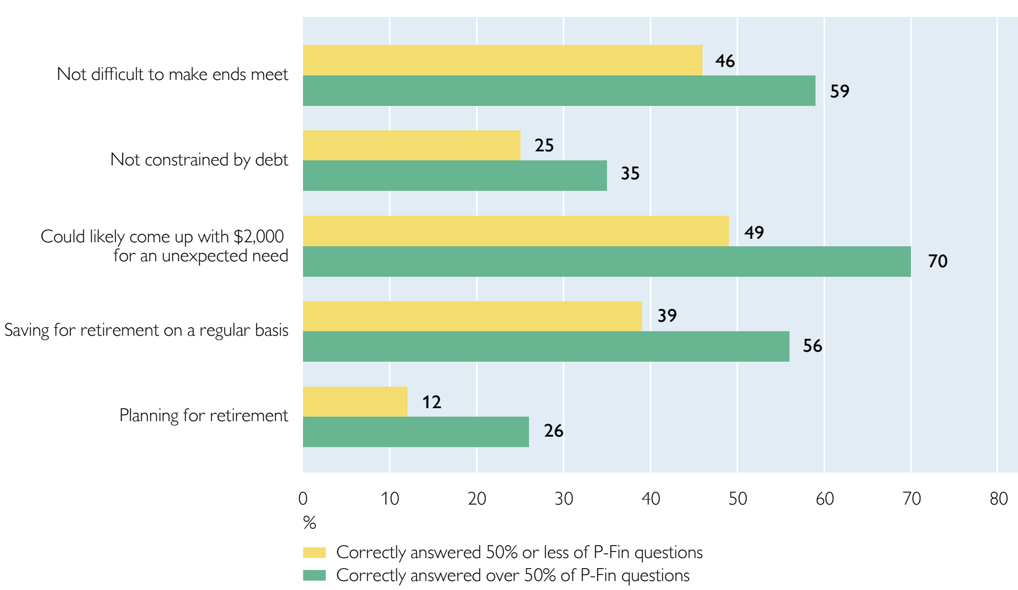


Source: Authors' calculations using the 2020 TIAA Institute-GFLEC Personal Finance Index.

The same finding holds when focusing on women in particular – those with greater financial literacy tend to exhibit greater financial wellness. Specifically, women who correctly answer more of the P-Fin Index questions are better able to make ends meet, more likely to feel unconstrained by debt, better able

Chart 6

Financial wellness and literacy among Black and Hispanic women



Source: Authors' calculations using the 2020 TIAA Institute-GFLEC Personal Finance Index.

to cope with a financial shock, and more likely to save and plan for retirement. Consistent with the findings among all US adult women, greater financial literacy is associated with greater financial well-being among underrepresented minority women. Black and Hispanic women who correctly answered over 50% of the index questions are more likely to engage in behaviors connected to higher financial well-being compared to underrepresented minority women who correctly answered only up to 50% of the index questions (chart 6).

Summary

Financial literacy is knowledge and understanding that enable sound financial decision-making and effective management of personal finances. In times that are anything but normal – like today with the COVID-19 pandemic and its economic consequences – the ability to make appropriate financial decisions matters greatly. Unfortunately, many Americans are functioning in today's environment with a poor level of financial literacy. This level is even lower among women compared to men, and within women, it is much lower among underrepresented minority women compared to their White peers. Especially problematic in today's environment is the finding that financial literacy is particularly low in the area of comprehending and understanding risk and uncertainty. This means that individuals are ill-positioned to make decisions in a time when uncertainty and volatility dominate economic and financial life. These findings point to where it would be useful to focus as the world eventually moves forward from the pandemic. Better financial well-being is related to greater financial literacy. This holds for all women, including underrepresented minority women. A heightened focus on improving financial literacy, with an emphasis on understanding and managing risk and uncertainty, is an important step that will increase women's financial resiliency in the future. While not a cure-all, increased financial literacy can lead to improved financial capability and practices that benefit even those with relatively modest resources.

Further reading

Yakoboski, P., A. Lusardi and A. Hasler. 2019. Financial Literacy in the United States and Its Link to Financial Wellness: The 2020 TIAA Institute-GFLEC Personal Finance Index. The TIAA Institute/GFLEC Insights Report.

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Yakoboski, P., A. Lusardi and A. Hasler. 2020. Financial Literacy and Wellness among African-Americans: New Insights from the Personal Finance (P-Fin) Index. The Journal of Retirement 8 (1). 22–31.

Yakoboski, P., A. Lusardi and A. Hasler. 2020. Financial Literacy and Wellness among U.S. Women: Insights on Underrepresented Minority Women. The TIAA Institute/GFLEC Insights Report.

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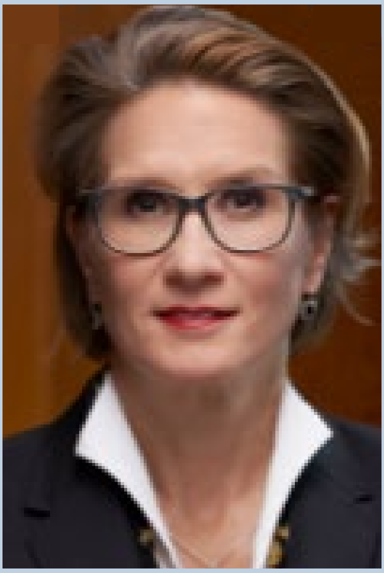

Gender and finance – A central bank's perspective

This summary provides the Swiss National Bank's perspective on the topics of gender, financial literacy, inflation and COVID-19 discussed during Session 4. It begins with stressing the importance of inflation perceptions and expectations for monetary policy and assesses gender-specific differences, which can also be observed in Switzerland. Then, some light on the role of financial literacy in explaining gender differences in inflation perceptions and expectations will be shed. Furthermore, the SNB's own efforts to improve financial literacy in Switzerland will be discussed. Finally, the article briefly touches on the pandemic's impact on the Swiss labor market, including gender-specific differences.

Inflation perceptions and expectations are crucial for monetary policy. At the heart of the SNB's mandate is price stability, which is closely linked to inflation perceptions and expectations. Stable inflation perceptions (and expectations) at levels that are consistent with price stability provide a nominal anchor for the economy. They reduce inflation persistence, curb harmful macroeconomic volatility (Duca and Kenny, 2021) and strengthen central bank credibility. This is important, as inflation perception that diverges significantly and persistently from a central bank's inflation objective could undermine the trust in a central bank's ability to control inflation.

Across various countries, including Switzerland, women appear to have systematically higher inflation perceptions and expectations than men (Kemeny and Pochon, 2016). However, explanations vary. Differences in shopping habits and types of purchase may explain the gender gap. For example, D'Acunto et al. (2020) argue that the gender gap is "tightly linked to participation in grocery shopping".

Nevertheless, these reasons are not universally accepted. While testing the explanations mentioned above, Bryan and Venkatu (2001) observed that the gender gap also exists between single men and single women, who are equally involved in shopping for similar types of goods. In addition, the gap was found to persist even during times when food prices were constantly low and stable.

According to recent research, the gender gap appears to be rather small, insignificant or even non-existent. A study on Switzerland by Burke and Manz (2014) found that there are "no significant differences between men and women in either the tendency to overestimate inflation or in the average accuracy (absolute error) of inflation forecasts once economic literacy is controlled for". Hence, according to these authors, different inflation perceptions are attributable to the degree of financial literacy and not to gender.

Levels of financial literacy are relatively high in Switzerland. Compared to ten other countries, Switzerland – along with Austria and Germany – is one of the leaders in financial literacy (Allianz, 2017). However, the absolute level of financial literacy is not particularly high. Only 50% of respondents in Switzerland were able to correctly answer questions concerning the "big three" concepts commonly used to measure financial literacy: compound interest, inflation and risk diversification (Brown and Graf, 2013).

The SNB launched its educational program Iconomix in 2007, with the aim of promoting economic and financial literacy in Switzerland. After all, the decisions a central bank has to take have far-reaching consequences for the population, who therefore should be able to comprehend the underlying considerations. In Switzerland, where citizens regularly vote on economic issues at all levels of government, a good understanding of how the economy works is particularly important.

Iconomix supports the teaching of economics in Swiss upper secondary schools, with a focus on active learning. Accordingly, the offering includes games, simulations and case studies on various economic issues, such as the division of labor and trade, market and price formation, and monetary policy. Iconomix is widely used: in 2020, around 39% of economics and humanities teachers at upper secondary level made use of the Iconomix web platform. Around 50% of the approximately 100 teaching units – available in at least three languages – are on financial literacy topics (Swiss National Bank, 2021).

In Switzerland, half of the "literacy gap" may be a "confidence gap". Brown and Graf (2013) found that although 62% of men answered all three questions on financial literacy correctly, compared to only 39% of women, the gender gap in financial literacy is not only tied to a higher frequency of incorrect answers. Rather, the share of women who "don't know or refuse to answer" at least one question (22%) is almost double that of men (12%).

There are no clear signs indicating that women in Switzerland were disproportionately more affected by unemployment during the COVID-19 pandemic. Between December 2019 and December 2020, the unemployment rate increased from 2.8% to 3.8% for men and from 2.3% to 3.2% for women (State Secretariat for Economic Affairs, 2021). The sharpest rise occurred during the first lockdown, between March and May 2020. Since then, unemployment rates have stabilized.

Comparable and more granular statistics are essential for telling the full story of the pandemic's socioeconomic impact on women and men. In Switzerland, short-time working has prevented a large increase in the unemployment rate. But on the other hand, the number of workers on short-time work compensation has soared to unprecedented levels: as of April 2020, more than a third of employees in Switzerland were on short-time work. Unfortunately, there are no publicly available gender-specific data, wherefore any conclusion at this stage must be considered preliminary.

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Gender and Finance – An Austrian perspective

Participation in the stock market and financial literacy are key elements to improve the financial well-being and financial resilience of individuals. As recent surveys by the Aktienforum and the OECD (Organisation for Economic Co-operation and Development) indicate, there is room for improvement in both areas among Austrian adults – and this applies especially to women.

1 Survey "Investing in the stock market"

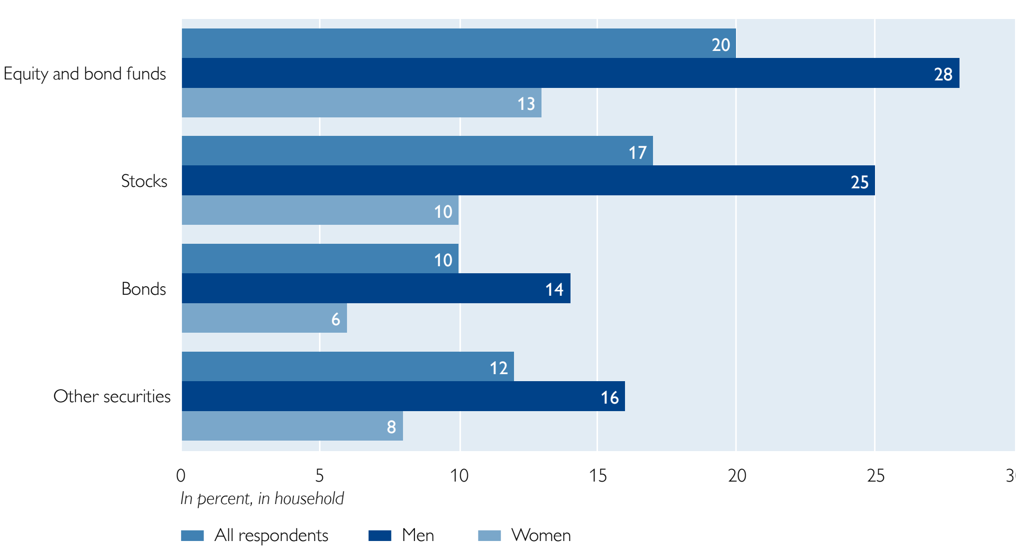
The Austrian Aktienforum[1] commissioned the renowned institute Peter Hajek Public Opinion Strategies[2] with the survey "Investing in the stock market". In January 2021, 1,000 respondents aged 16 and above participated in the survey (+/–3.1% margin of error). Among many interesting findings, the results revealed some significant gender-related differences.

First of all, while the participation of Austrians in the capital market is generally rather low, the differences between men and women are striking, especially regarding equity and bond funds as well as stocks (chart 1).

Concerning the question why respondents are not investing in the stock market, the results also show significant gender-related differences (chart 2). While approximately every second woman stated a "lack of knowledge of stock markets", only every third man did so as well (49% of women vs. 30% of men). But this does not necessarily mean that men have a significantly better knowledge. It merely indicates that women might be less confident or more critical when assessing their knowledge. Another question of the survey asked respondents to rate their knowledge about investing in the stock market: while

Chart 1

Forms of investment



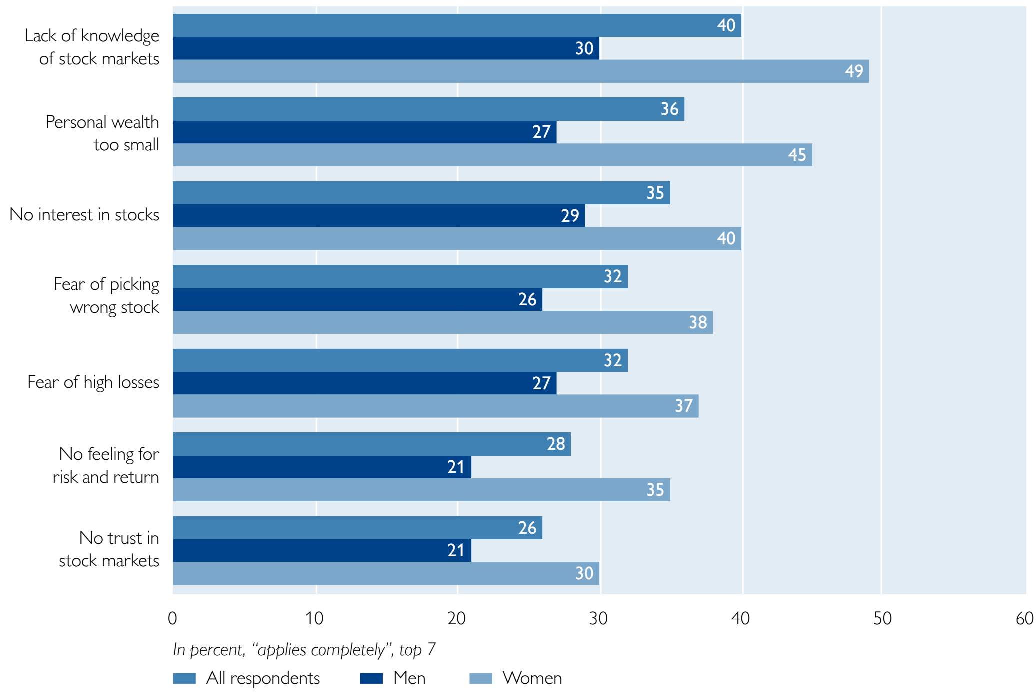
Source: Compilation by OeKB based on survey data from Peter Hajek Public Opinion Strategies GmbH.

[1] *https://www.aktienforum.org/.*

[2] *http://www.peterhajek.at/.*

Chart 2

To what extent do statements about participating in the stock market apply to you?



Source: Compilation by OeKB based on survey data from Peter Hajek Public Opinion Strategies GmbH.

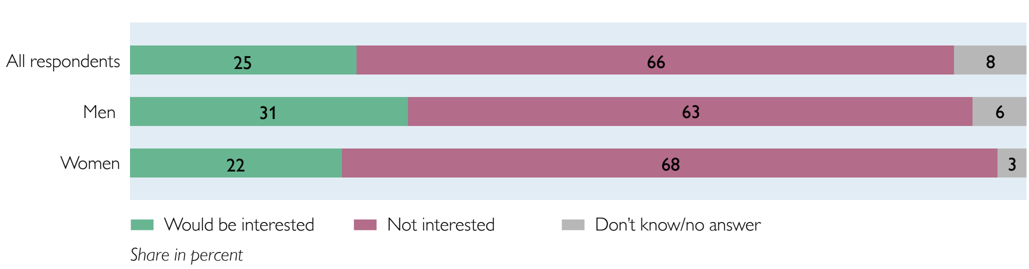
31% of men rated their knowledge as either "very good" or "rather good", it is only 10% of women who did so. On the other hand, 59% of women labeled their knowledge as "not good at all" compared to 27% of men.

However, when looking at chart 2 and the answers "fear of picking the wrong stock", "fear of high losses", "no feeling for risk and return" and "no trust in stock market", it becomes evident that women are generally more risk-conscious and less confident to participate in the stock market. In this regard, a higher level of knowledge would improve women's confidence to participate in the stock market and to allow for a better risk assessment.

Regardless of these interpretations and considerations, a major reason for and empirical fact about why less women are participating in the stock market than men is undisputable: 45% of female respondents stated that their "personal wealth is too small" compared to 27% of male respondents.

Chart 3

Would you currently be interested in buying stocks or other securities?

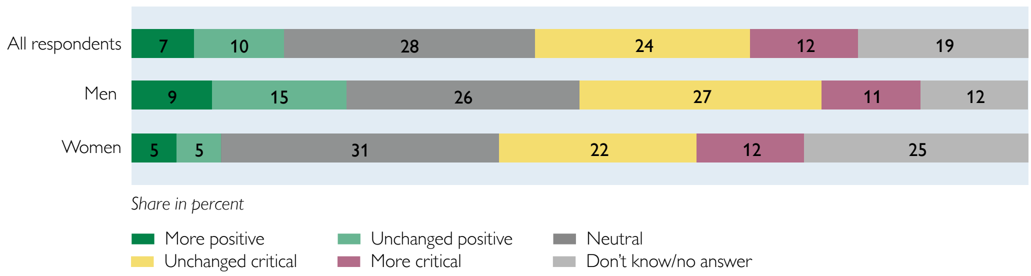


Source: Compilation by OeKB based on survey data from Peter Hajek Public Opinion Strategies GmbH.

Note: Basis = respondents who do not own any securities.

Chart 4

How has your view of the stock markets changed during the COVID-19 pandemic?



Source: Compilation by OeKB based on survey data from Peter Hajek Public Opinion Strategies GmbH.

Note: Basis = respondents who do not own any securities.

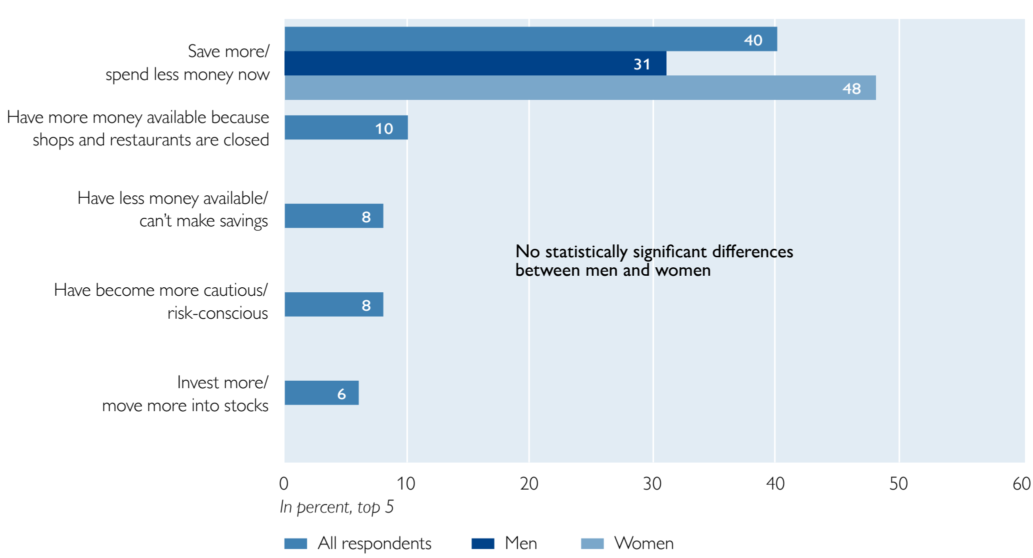
In accordance with these findings, among respondents who did not own any securities, men were the ones who were significantly more interested in buying stocks, bonds, investment funds or other securities, although the numbers were rather low in both cases (31% of men vs. 22% of women; chart 3).

The survey also examined possible effects of the COVID-19 pandemic. In general, the results show that – regardless of gender – the crisis did not change people's views to a large degree (chart 4). In total, 20% of male respondents said their view of the stock market had changed – 11% became more critical. Among women, 17% have a changed view with 12% having become more critical. However, there is one very significant difference: every fourth woman answered "don't know" or did not answer at all – compared to only 12% of male respondents (chart 5). This supports the assumption that women are generally less confident about expressing their opinion or are more critical when assessing their knowledge.

Regarding possible changes in the investing and saving behavior due to

Chart 5

How has your investing and saving behavior changed because of the pandemic?



Source: Compilation by OeKB based on survey data from Peter Hajek Public Opinion Strategies GmbH.

Note: Basis = respondents who have changed their behavior.

the COVID-19 pandemic, big gender-specific differences in general could not be discerned – with one big exception: almost every second woman answered that she was "saving more/spending less" because of the crisis compared to every third man (48% of women vs. 31% of men). This indicates that women are also much more risk-conscious when it comes to their investments.

2 Developing a national financial literacy strategy in Austria

Assessing the financial literacy competencies of the population is a key component of a successful national strategy. The "OECD/INFE[3] 2020 International Survey of Adult Financial Literacy"[4] covers 26 countries from Asia, Europe and Latin America[5] using the globally recognized OECD/INFE toolkit. The report presents the overall financial literacy scores and their components knowledge, behavior and attitudes.

Austria (1,418 participants aged 18 and above) ranks third among those 26 countries: respondents achieved 68.5% of the maximum score, while the entire sample reached 60.5%. The major reason for this high ranking is the dimension financial knowledge where Austrians scored 76.0% compared to an average of 62.8%. However, it is important to note that the overall financial literacy score measures a set of basic skills, behaviors and attitudes. Scoring the maximum effectively means that an individual has acquired a basic level of understanding financial concepts and is able to apply some prudent principles when dealing with their finances.

Regarding gender-related differences, the report states that statistically men appear to have greater financial knowledge across the entire sample. In Austria, male respondents achieved 80% of the maximum score, while women reached 73%. This is reflecting the findings of the survey commissioned by the Aktienforum. Concerning the dimensions financial behavior, financial attitude and financial well-being, statistically significant differences between Austrian men and women are not apparent.

As there is room for improvement across all elements of financial literacy, Austria's Federal Ministry of Finance (BMF) launched a project to develop a national financial education strategy in May 2020. Based on a mapping of the existing financial education activities in Austria, the goal of the project is to increase financial literacy and awareness to not only reinforce the financial well-being but also increase the resilience to economic shocks of Austrians of all generations.

The BMF, the European Commission and the OECD cooperated to address this topic and published the report "Financial Literacy in Austria: Relevance, evidence and provision"[6] in 2021. Its key findings and considerations are asfollows:

- *Build on stakeholder involvement for an effective and efficient coordination*. While the number of Austrian stakeholders actively involved in the provision of financial education is remarkable, the provision takes place in an uncoordinated fashion. Financial literacy research and provision will benefit from the establishment of an institutional

[3] *International Network on Financial Education.*

[4] *https://www.oecd.org/financial/education/oecd-infe-2020-international-survey-of-adult-financial-literacy.pdf.*

[5] *Participating countries and economies in alphabetical order: Austria; Bulgaria; Colombia; Croatia; Czech Republic; Estonia; France; Georgia; Germany; Hong Kong, China; Hungary; Indonesia; Italy; Korea; Malaysia; Malta; Moldova; Montenegro; Peru; Poland; Portugal; Republic of North Macedonia; Romania; Russia; Slovenia; and Thailand.*

[6] *https://www.oecd.org/daf/fin/financial-education/Financial-literacy-in-austria-relevance-evidence-provision.pdf.*

framework for cooperation provided by a national strategy. Additionally, the strategy will be instrumental in bringing together public and non-public actors to adopt a common definition of financial literacy.

- *Target audiences based on evidence and policy priorities.* The majority of financial education initiatives in Austria targets young people in schools, but all citizens should be addressed to promote financial literacy. Women, for example, are among those vulnerable groups of the population that are currently lacking proper access to financial literacy initiatives.
- *Address the general population through a comprehensive approach.* Austria does not have one national reference website that acts as a main source of information and as a repository of existing initiatives and tools. Mass communication campaigns could also be considered as part of the future strategy. While face-to-face delivery of financial education is well established in Austria, it could be taught at schools and further developed at workplaces.
- *Address all areas that underpin financial well-being.* The national strategy could ensure that programs target all core competencies necessary for financial well-being and long-term resilience. Concerning younger generations, the focus should be on the areas of investing; consumer rights and responsibilities; frauds and scams awareness; and safe use of credit. Regarding adults, the topics of safe use of credit as well as fraud and scam awareness should be covered.
- *Encourage research and program evaluation.* Very few stakeholders evaluate the impact of their initiatives, and they do not apply a consistent monitoring and evaluation methodology. With the aid of a national strategy, the implementation of a proper impact assessment can be encouraged, and a common approach to monitoring as well as carrying out impact evaluations can be adopted.

To summarize, both surveys presented indicate that there is room for improvement regarding the financial knowledge and participation in the stock market of Austrian adults, especially of women. The development of a national financial literacy strategy will increase the financial well-being and the financial resilience of individuals – which will also contribute to reducing gender imbalances in the economy and in society.

The Economics Conference hosted by the OeNB is an international platform for exchanging views on monetary and economic policy as well as financial market issues. It convenes central bank representatives, economic policy decision makers, financial market players, academics and researchers.

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