



Characteristics of Price Developments in Japan
Summary of the First Workshop on "Issues Surrounding
Price Developments during the COVID-19 Pandemic"

Monetary Affairs Department
Bank of Japan

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Abstract

On March 29, 2022, the first workshop on "Issues Surrounding Price Developments during the COVID-19 Pandemic," entitled "Characteristics of Price Developments in Japan," was held at the Bank of Japan's Head Office. Taking differences in consumer price developments between Japan, the United States, and Europe in the wake of the COVID-19 pandemic as a starting point, a lively discussion was held on the characteristics of price developments in Japan, involving experts and scholars in economics and empirical analysis.

Session 1 focused on the characteristics of Japan's lower consumer price inflation in the wake of the COVID-19 pandemic compared to the US and Europe based on the results of an analysis using the price change distribution and core inflation indicators. In addition, based on empirical results showing that in Japan the interaction between wages and prices is weak, discussions were held on the link between the two, which is regarded as important in terms of the sustainability of inflation. In Session 2, service prices, which are one of the reasons for differences in consumer price developments in Japan, the US, and Europe, were highlighted and issues related to the measurement of service prices, especially rent, were discussed. It was pointed out that which measurement approach is used may have a sizable impact on the measured difference in the rate of inflation between Japan and other countries in the wake of the COVID-19 pandemic.

Session 3 consisted of a panel discussion focusing on three main issues: (1) the reason for the differences in consumer price developments between Japan, the US, and Europe; (2) the outlook for future prices; and (3) the challenges for monetary policy based on the

* The views expressed at the workshop and summarized in this paper are those of the individual speakers and do not necessarily represent the views of the Bank of Japan or the Monetary Affairs Department.

current situation of and outlook for prices. With regard to (1), panelists generally agreed that major reasons for the acceleration in inflation in the US include the sharp recovery in demand and the decline in the labor force participation rate; in contrast, no similar developments were seen in Japan, so that consumer price inflation in Japan has remained weak compared to the US. Regarding (2), it was pointed out that on the one hand Japan faced the risk of prices falling again due to chronic deflationary factors that have been in place since before the pandemic and the decline in demand caused by the prolonged impact of COVID-19; on the other hand, there is also the risk of a rise in inflation due to the cost-push shock triggered by the sharp rise in commodity prices. It was then pointed out that the key factor in determining which risk is more likely to materialize is future developments in wages. Regarding (3), panelists shared the view that it is desirable to continue monetary easing in response to weak demand, while it is desirable to respond to price hikes in some items, particularly energy, by measures other than monetary policy.

1. Introduction

This paper is a summary of the first workshop on "Issues Surrounding Price Developments during the COVID-19 Pandemic," entitled "Characteristics of Price Developments in Japan," held on March 29, 2022, at the Bank of Japan's Head Office. The workshop began with opening remarks by Bank of Japan Deputy Governor Masayoshi Amamiya. In Sessions 1 and 2, staff members of the Bank of Japan's Monetary Affairs Department gave presentations, followed by discussions by discussants and floor participants. Session 3 consisted of a panel discussion on "Post-COVID Price Developments," followed by closing remarks by Bank of Japan Deputy Governor Masazumi Wakatabe (see Appendix 1 for the program).

The following is a summary of the two presentation sessions, the panel discussion, and the closing remarks.¹ The affiliation of each speaker below was current at the time of the workshop, and honorific titles are omitted in the text (see Appendix 2 for a list of speakers and their affiliations). Seiichi Shimizu served as the moderator for the entire workshop.

2. Session 1: "Characteristics of Inflation Dynamics in Japan in Recent Years"

(1) Presentation

In the presentation, Yoshitaka Ichise started by reporting the results of the analysis of the reasons for the lower consumer price inflation in Japan in the wake of the COVID-19 pandemic compared to the United States and Europe. He then empirically showed that in Japan the link between wages and prices, which is important from the perspective of the sustainability of inflation, is weak and proposed several hypotheses regarding the reasons for this weak link.

In the analysis of consumer price developments in the wake of the COVID-19 pandemic, he presented his view on the characteristics of price developments in Japan and the underlying mechanisms as seen in the item-level distribution of price changes and in core inflation indicators. Specifically, he pointed out, first, that while in the US and Europe the price change distribution as a whole has shifted in the direction of price increases in the wake of the pandemic, there has been almost no such change in Japan. Second, all core inflation indicators in the US have risen, whereas in Japan, the mode and

¹ For the full text of the opening remarks, "The COVID-19 Crisis and Inflation Dynamics," see: https://www.boj.or.jp/en/announcements/press/koen_2022/ko220329b.htm/

the weighted median, which indicate the spread of price changes, have hardly risen at all, although the trimmed mean has risen moderately. Based on these findings, he argued that although inflation in Japan has been gradually rising as a trend, the spread across items so far has been limited compared to that in the US and Europe, and the increase in inflation has been moderate. Next, he presented the results of analyses based on core inflation indicators focusing on the relation with output gap and the stickiness of prices in order to investigate reasons for the observed developments. He started by noting that "cyclical indicators," which aggregate items with a high correlation with the output gap and the unemployment rate, and "sticky indicators," which aggregate sticky items with infrequent price revisions, were useful in empirically assessing the relationship between prices on the one hand and the business cycle and inflation expectations on the other. Based on the results of this analysis, he suggested that the reason for the lower consumer price inflation in Japan in the wake of the COVID-19 pandemic compared to the US and Europe was lower and stable inflation expectations as well as the moderate improvement in the output gap.

Regarding the interaction of wages and prices, he used Granger causality tests and a vector autoregression model to examine changes over time in Japan and differences between Japan and the US, and then highlighted key points in forecasting future wage and price developments. Based on the empirical analysis, he argued that the interaction between wages and prices in Japan was weaker both compared to the past and compared to the US, and that even if prices were to rise due to some shock, this was unlikely to lead to cumulative increases in prices through wage increases. Further, he proposed the hypothesis that one factor explaining the weaker relationship between wages and prices in Japan was "rational inattention," that is, the fact that since price increases had not exceeded regular wage increases, individual households did not recognize price increases as increases in the cost of living and were therefore less likely to pay attention to prices. Other factors he pointed out were the elastic supply of labor mainly by women and the elderly and the large room for labor productivity growth. Finally, he stated that the key point in forecasting future wage and price developments was whether any of these trends were likely to reverse.

(2) Comments from the discussants

Etsuro Shioji, one of discussants, commented that the presentation, by using appropriate indicators and focusing on wages, which play an intermediary role between economic activity and prices, allowed a more accurate understanding of Japan's low inflation. He then pointed out that when analyzing Japan's inflation dynamics in recent

years, it was also necessary to consider supply-side factors. In particular, he highlighted the importance of analyzing developments in energy prices, noting that prices of energy-related goods, including gasoline, could affect inflation expectations through households' perception of inflation because of the high purchase frequency of such items. Next, noting that the hypothesis in the presentation that "rational inattention" was one of the reasons for the weak pass-through from prices to wages was interesting, he presented his own view on the role of rational inattention. He pointed out that overcoming rational inattention might be undesirable in terms of economic welfare, since rational inattention meant that people were in a situation where they did not have to care about inflation developments. Finally, he indicated that in measuring the link between wages and prices, it would be beneficial to broaden the scope of the analysis by examining developments in wage-related indicators that can be regarded as marginal costs, such as the wages of part-time and temporary workers and non-scheduled hours worked.

Discussant Masayuki Morikawa commented that the presentation provided a useful analysis because it clearly showed that the item-level price change distribution and core inflation indicators in Japan differ significantly from those in the US and Europe, and that the link between wages and prices had weakened in Japan. In addition, he made the following observations regarding the methods used to examine core inflation indicators and the link between wages and prices, as well as the interpretation of the results of the analysis. With regard to the core inflation indicators, he pointed out that the approach of classifying items into "sticky indicators" and "cyclical indicators" did not capture changes in the frequency of price revisions themselves and asked why there were items that were classified differently in Japan and the US. He also noted that the analytical approach used for examining the link between wages and prices captured the relatively short-term interaction, and there may be cases where it was not suitable for clarifying the structural relationship over the medium to long term. Further, regarding the reasons that the link between wages and prices had weakened, he pointed out that even when prices were falling wage declines may have been limited due to downward rigidity in nominal wages, and that wage declines had not led to a fall in prices under accommodative monetary policy. Finally, like Shioji, he stated that if the rate of consumer price inflation is stable near zero against a backdrop of rational inattention, this should be seen as a good thing in a phase of heightened global inflation concerns.

(3) General discussion

In response to discussant Shioji's comment on the importance of supply-side factors in Japan's inflation dynamics, co-presenter Takuji Kawamoto commented that relying only

on core indicators that exclude items sensitive to inflation in imports such as energy and food items risked underestimating the second-round spillover effects of a cost-push shock. In addition, he noted that in order to determine underlying price developments, it was necessary to examine in a balanced manner not only the item-level price change distribution but also other indicators such as the trimmed mean and the weighted median, which mechanically remove irregular price movements based on the distributional information. Moreover, with regard to "rational inattention," which the two discussants, Shioji and Morikawa, commented on positively, Kawamoto pointed out that this in some respects was connected to former Federal Reserve Chair Greenspan's definition of price stability. He further noted that currently in the US, workers' strong interest in inflation had created a "wage-price spiral" that had led to an acceleration in inflation, while in Japan, the fact that no such spiral had existed since the second oil crisis was the fundamental reason for the long period of price stagnation. Finally he observed that on the one hand, for Japan to break free from zero inflation it was necessary to restore the mechanism in which wages and prices nudge each other up; on the other hand, under the current circumstances of intermittent global supply shocks, if a wage-price spiral was more likely to emerge, there was a risk that inflation expectations may become unstable and that central banks may find it difficult to stabilize the rate of consumer price inflation near their target.

In response to the comment from discussant Shioji that the scope of the analysis should be expanded to include the wages of part-time and temporary workers, presenter Ichise noted that while from a theoretical perspective this was correct, in spite of the considerable increase in part-time wages from 2017 to 2018, wages did not increase on a macroeconomic basis, which was difficult to explain. Moreover, regarding the different classification of certain items in Japan and the US in the "sticky indicators" and "cyclical indicators," which discussant Morikawa asked about, he replied that in the case of administered prices, for example, changes in costs, including energy price increases, were easily reflected in pricing in the US, while in Japan, cost increases were not sufficiently reflected in pricing, since subsidies are the norm.

From the floor, Kazuo Ueda, Keiichiro Kobayashi, and Shin-ichi Fukuda noted that it was interesting that this presentation highlighted that the fact that increases in consumer prices had remained within the range of regular wage increases was the reason for the continued rational inattention in Japan. Ueda then highlighted the economic welfare costs of zero inflation, pointing out that under a state of zero inflation caused by rational inattention, there was not a sufficient "buffer" with regard to the effective lower bound on nominal interest rates and that the smooth adjustment of relative prices may be

impeded. Kobayashi focused on the causal loop in which the low rate of consumer price inflation fosters rational inattention and causes wages not to rise, while the low rate of wage growth makes households less tolerant of price rises, resulting in a lower rate of price inflation, and said that this loop should be examined in more detail. Fukuda pointed out that a significant reason for the fact that regular wage increases had come to account for the largest part of wage revisions was that the premise of lifetime employment had collapsed and labor unions had come to emphasize employment stability rather than base pay increases. Meanwhile, referring to his own empirical research using micro data, Tsutomu Watanabe, with regard to the link between wages and prices, stated that although no relationship was found between wage changes and price-setting behavior at the firm level, at the household level, future expectations on wages had an impact on households' tolerance of price rises. Finally, responding to Shioji's point by saying that households' heightened inflation perceptions and inflation expectations due to high energy prices may have a restraining effect on prices through downward pressure on consumption, Seisaku Kameda pointed out that surveys on wage and income prospects may be more useful in measuring households' tolerance of price rises.

3. Session 2: "Service Prices in the CPI: Focusing Mainly on Rents"

(1) Presentation

Presenter Yuto Iwasaki examined service prices, which are one of the reasons for the differences in consumer price developments between Japan, the United States, and Europe during the current phase. Focusing in particular on rent, especially imputed rent, and mobile phone charges, he provided an overview of issues in the measurement of these items. He pointed out that if measurement approaches similar to those in the US and Europe were applied in Japan, Japan's consumer price inflation rate would be higher than the current rate. However, he added the caveat that no international consensus on the measurement approaches for these items existed and that he did not necessarily recommend the approaches used in this presentation be adopted in Japan.

He started by highlighting that measuring owner-occupied housing costs was difficult from both a theoretical and a practical perspective, and that what was measured and how differed across countries. Specifically, he noted that while Japan and the US had adopted the "rental equivalence approach," in which owner-occupied housing costs are estimated based on the rents of rental properties, the rents used in the US were adjusted for aging deterioration, while in Japan they were not. He then showed that, according to estimates by the Ministry of Internal Affairs and Communications (MIC), adjusting for aging

deterioration would push up Japan's year-on-year rate of change in the consumer price index (CPI) by 0.1 percentage points. He also pointed out that while the US excluded units subject to rent control in estimating imputed rent, in Japan rent controls were not taken into account. In this context, he observed that since in Japan the Act on Land and Building Leases imposed substantial restrictions on ongoing rents (rents on properties where the same household continues to live), rents were upwardly rigid, and he suggested that one way to deal with this issue would be to estimate imputed rent using new contract rents (rents on properties where the tenant has changed). He observed that the estimates suggest that the increase in the year-on-year rate of change in the CPI following this approach would, on average, be slightly larger than when adjusting for aging deterioration.

Furthermore, as an approach to measuring owner-occupied housing costs other than the rental equivalence approach, he introduced the "acquisition approach," which is scheduled to be introduced in the euro area going forward. He argued that this approach more directly reflected house prices and that its advantages included the possibility of constructing an index that better reflected people's perceptions and the fact that it was less likely to be affected by structural aspects of the rental market, including regulations. He suggested that if this approach were applied to Japan, there was a possibility of a clear upward revision in year-on-year rate of change in the CPI, especially in the current period when house prices were rising.

With regard to mobile phone charges, he reviewed the issues surrounding how the online-only plans introduced in April 2021 could be dealt with. He first introduced MIC's change to its method, in which since January 2022 the number of subscriptions to existing plans and online-only plans were taken into account, and discussed the reasons for the change. Then, for the period before the change, from April to December 2021, he showed that if the actual number of subscriptions were reflected, the year-on-year rate of change in the CPI during this period would have been clearly higher. However, he added the caveat that it was likely difficult to reflect the weights in real time due to practical issues in compiling the statistics.

(2) Comments from the discussants

Discussant Takashi Unayama argued that rents and mobile phone charges could explain only a limited part of the differences in the rate of consumer price inflation between Japan, the US, and Europe in the wake of the COVID-19 pandemic and were not the main reason for these differences. In addition, he expressed the view that the contribution of rent to inflationary pressure in the US should not be treated as a feature of the pandemic, since the larger weight of rent in the CPI played a more important role in the inflation difference

than the acceleration of rent increases during the pandemic.

He then referred to the estimates of the "rental equivalence approach" provided in the presentation and expressed his view that the impact of taking aging deterioration into account was not large. He also argued that the sticky nature of ongoing rents in Japan was due not so much to the Act on Land and Building Leases as to the fact that many tenants continued to live in the same home regardless of the rent, due to moving costs and other factors. With regard to the "acquisition approach," he argued that this method was not currently used in the US and Europe, and that it could not explain the differences in price developments between Japan, the US, and Europe.

Finally, in relation to the measurement of mobile phone charges, he pointed out that while basic price index theory was based on the assumption of cost-minimizing rational consumers, how to incorporate into indexes that in practice consumers do not always choose the lowest price posed a difficult challenge.

Discussant Chihiro Shimizu commented that the various estimation methods presented seemed reasonable and then summarized recent international discussions on the measurement of owner-occupied housing costs.

He started by pointing out that the measurement of housing services had attracted international attention because of the large weight of housing services in the CPI and the fact that the housing market was regarded as the most important nexus of asset and goods markets. Next, he stated that the difficulty with the rental equivalence approach was that homeowners themselves did not know what the appropriate rent would be if they were to rent out the property. Practical issues regarding the approach, in his view, concerned (1) adjustments for quality changes, (2) adjustments for aging deterioration, and (3) dealing with rent stickiness. Regarding the third issue of rent stickiness, he noted that it is planned for the theory part of the Consumer Price Index Manual by the International Monetary Fund and other international organizations, which is currently under revision, to recommend the use of rents that reflect actual market conditions, including new contract rents, for the estimation of imputed rents.

Next, pointing out that using the rental equivalence approach may not necessarily be desirable for Japan in light of the practical issues mentioned above, he introduced the "opportunity cost approach" as an alternative estimation approach. Noting that in this approach, the larger of the cost estimated based on the rental equivalence approach and the cost estimated based on the "user cost approach" was regarded as the opportunity cost of owner-occupied housing, he argued that this approach compensated for the practical

shortcomings of the user cost approach, which was viewed as the most desirable approach from a theoretical perspective. Moreover, he expressed the view that the foundations for the use of the opportunity cost approach in practice, including the compilation of data, were being laid internationally.

(3) General discussion

In response to the point made by discussant Unayama that rents were not the main cause of the difference in the rate of consumer price inflation between Japan and the US, presenter Iwasaki pointed out that, as also seen in current figures, rents did make a large contribution to differences between the overall indexes in Japan and the US. Moreover, given the view of some experts that rents in the US would rise further, the difference in inflation with Japan may widen further in the future. In addition, in response to the comment that the magnitude of the contribution of rent was due to the weighting of rent in the CPI, he observed that items with a large weight were rather important because measurement errors in such items were more likely to affect the overall index. Regarding the suggestion that the high stickiness of rents was not due to the Act on Land and Building Leases but rather to factors such as the cost of moving, he responded that these factors would not be a reason for rents to remain unchanged. Next, regarding the proposal of the "opportunity cost approach" by discussant Chihiro Shimizu, he recognized that theoretically, the estimates of the "user cost approach" and the "rental equivalence approach" would coincide if there was perfect arbitrage between the owner-occupied and rental markets; however, in practice, the values of the user cost approach and the rental equivalence approach diverged because arbitrage did not work. He then observed that in order to discuss the desirability of the rental equivalence approach, a comparison with the user cost approach, which does not rely on rental market data, was also necessary.

From the floor, Masazumi Wakatabe asked discussant Unayama about his view on the lack of a link between house prices and rents in Japan highlighted by presenter Iwasaki. Unayama pointed out that while house prices had been pushed up in recent years by rising material and labor costs, these cost increases may not have been passed on to rents. He also noted that the fact that cost increases had not been passed on to prices was a phenomenon seen not only in rents but also in a wide range of other items. Ueda added that, from a theoretical perspective, it was entirely possible for rising house prices and falling rents to coexist when risk premiums etc. are declining. Discussant Chihiro Shimizu expressed the view that the reason for the lack of a link between house prices and rents was the segmentation between the owner-occupied and rental markets, and he reiterated that under such segmentation, using the rental equivalence approach was not desirable.

While acknowledging that there were issues in the measurement of rent, Tsutomu Watanabe raised the issue that, in discussing price developments in Japan, it may be more important to note that, in practice, the market structure was such that the probability of rent price revisions was extremely low for both new contract and ongoing rents. Ryo Jinnai pointed out that, theoretically, if ongoing rents remained unchanged because of the Act on Land and Building Leases, new contract rents were likely to be set taking this fact into account. While under such circumstances new contract rents were likely to reflect people's inflation expectations, if, as pointed out by Tsutomu Watanabe, new contract rents were in fact rigid, the reasons for this were a very interesting issue that should be explored. In response to these observations, co-presenter Takushi Kurozumi pointed out that in the housing market, as in the goods market, households may have a low tolerance of price rises, and stated that it was important to deepen our understanding of the structure of the housing market.

4. Panel Discussion: Post-COVID Price Developments

Moderator: Kosuke Aoki (University of Tokyo)

Panelists: Keiichiro Kobayashi (Keio University)

Tsutomu Watanabe (University of Tokyo)

Shinichi Uchida (Bank of Japan)

4.1 Panel presentations

At the beginning of the session, Kosuke Aoki, the moderator of the panel discussion, presented the following three points that he asked the panelists to address: (1) their current views on price developments, that is, why the rates of consumer price inflation in Japan, the United States, and Europe in the wake of the COVID-19 pandemic differed; (2) the future outlook for prices, that is, whether consumer prices in Japan could rise like those in the US and Europe; and (3) the challenges for monetary policy based on the current situation of and outlook for prices. The panelists presented their views on these points.

(1) Keiichiro Kobayashi (Keio University)

With regard to (1), panelist Kobayashi highlighted the weak demand in Japan. As reasons for this, he first noted that since in Japan the emphasis was on preventing the spread of COVID-19 infections, social restrictions for a given number of infections were stricter in Japan than in the US and Europe. Moreover, the continued difficulty in obtaining PCR (polymerase chain reaction) tests had contributed to concerns about the "counterparty risk" of not knowing who is infected. With regard to (2), he argued that the

outbreak of the Omicron strain and its variants could put downward pressure on demand and therefore on prices, while supply disruptions and the situation in Ukraine at the same time could also cause a cost-push shock. With regard to (3), he pointed out that it was appropriate to continue with accommodative monetary policy in response to sluggish demand. He also expressed the view that it would be desirable to respond to cost-push shocks through redistributive fiscal policy. Moreover, while the funding for this should come from a temporary increase in the issuance of government bonds, at the same time it was necessary for the government to strengthen its commitment to fiscal restructuring over the medium to long term.

(2) Tsutomu Watanabe (University of Tokyo)

With regard to (1), panelist Tsutomu Watanabe observed that in Japan and the US the fear of getting infected at the beginning of the pandemic in 2020 changed people's consumption behavior to the same extent and pushed down the rate of consumer price inflation by about the same amount. However, developments since the start of 2021 could not be explained by changes in consumption behavior but rather by changes in labor supply behavior. In the US, the fear of getting infected had led to the "Great Resignation" or "Great Retirement" highlighted by Masayoshi Amamiya in his opening remarks, while in Japan no such phenomenon was observed, resulting in the difference in wage and price developments. Regarding (2), Tsutomu Watanabe argued that given that households in Japan continued to be fearful, there was a risk of a decline in labor supply and a rise in wages and prices, similar to the US. Regarding (3), he pointed out that Japan was in a difficult phase in terms of monetary policy conduct in that it needed to appropriately address two problems at the same time: "chronic deflation," which had been happening since before the pandemic, and "acute inflation," which had resulted from rising commodity prices and other factors. Giving wages as a specific example, he suggested that while policies to encourage wage increases were necessary to deal with chronic deflation, it was necessary to restrain wage increases in order to deal with acute inflation, so that it was very difficult to determine which of the two measures should be adopted.

(3) Shinichi Uchida (Bank of Japan)

With regard to (1) and (2), panelist Shinichi Uchida cited the strength of demand, in addition to the decline in the labor force participation rate, as a factor contributing to the high inflation in the US. He further pointed out that in Europe, rising energy prices were the main cause of high inflation. In contrast, in Japan, he noted, there was a large peak at zero percent in the item-level distribution of CPI inflation, adding that this remained unchanged from before the COVID-19 pandemic and that there was a strong "norm" of

"not changing price tags." Regarding (3), he stated that while the asymmetric monetary policy framework newly introduced in the US and the euro area in recent years, which takes the effective lower bound on nominal interest rates into account, was robust against demand shocks, how to respond to cost-push shocks was a difficult issue. For Japan, on the other hand, he expressed the view that it was important to achieve a tight labor market through monetary easing to bring about increases in wages and service prices.

4.2 Discussion

The presentations by the panelists were followed by discussions including floor participants.

(On behavioral changes due to the pandemic)

Panelist Tsutomu Watanabe asked Kobayashi whether Japanese people's fear of COVID-19 would continue when infections temporarily subside in the future. Kobayashi pointed out that although uncertainty was extremely high, he believed that some of the elderly and medical personnel would continue to be wary, while general businesses and the young would become less wary. He added, however, that given Japan's medical system and other factors, it was highly likely that cautious measures against COVID-19 would continue.

Wakatabe argued that the "Great Resignation" or "Great Retirement" in the US was the result not only of fear but also of other factors, such as increases in pension assets due to rising prices of financial products and changes in people's priorities, including greater emphasis on leisure time. He then suggested that the risk of a decline in the labor force participation rate in Japan was probably low because no similar developments had occurred in Japan to any great extent. Panelist Tsutomu Watanabe, while recognizing that the factors pointed out by Wakatabe may have played a role, highlighted that any of these factors would have a permanent effect on labor supply.

Unayama raised the question whether demographic structures, including the share of the elderly, may have played a role in the differences in consumer price trends between Japan, the US, and Europe during the current phase. Panelist Tsutomu Watanabe pointed out that in the US, as in Japan, it was the elderly who changed their behavior and argued that the pandemic may have led to structural changes in the behavior of the elderly in terms of labor supply. Panelist Kobayashi noted that because in Japan the elderly, who were more susceptible to severe disease, made up a larger population share, social restrictions for a given number of infections had tended to be stricter in Japan than in the US and Europe, and he believed that this tendency would continue.

Wakatabe asked whether the "counterparty risk" pointed out by panelist Kobayashi could be reduced through policy measures. Kobayashi responded that further action was needed in healthcare policy. Taisuke Nakata agreed with Kobayashi and stated that COVID-19 countermeasures could be a risk factor that might restrain future growth of the Japanese economy.

(On the risks of "chronic deflation" and "acute inflation")

Moderator Aoki asked panelists Kobayashi and Uchida how they would assess the risks of "chronic deflation" and "acute inflation" presented by Tsutomu Watanabe. Kobayashi noted that in Japan, there was a risk of continued chronic deflation due to sluggish demand caused by economic uncertainties including the pandemic, while at the same time there was a risk of acute inflation due to a "wage-price spiral." He then argued that the appropriate thing to do would be to respond to the risk of acute inflation through fiscal policy and to the risk of chronic deflation through continued monetary easing. Uchida concurred with Kobayashi's view and added that the greater risk in Japan, where interest rates were likely to hit the zero lower bound due to low growth, was the risk of chronic deflation. Haruhiko Kuroda highlighted the importance of continued monetary easing, saying that in Japan, which relied on imports for most of its resources, higher energy prices would have a negative impact on the economy through lower real household incomes and deteriorating corporate profits.

Fukuda asked what the panelists thought about the risk that monetary easing to reduce the risk of chronic deflation could increase relative price distortions caused by acute inflation. Panelist Tsutomu Watanabe pointed out that relative price distortions stemming from chronic deflation also affected resource allocation and argued that it was difficult to judge whether it was acute inflation or chronic deflation that reduced economic welfare more. Panelist Kobayashi suggested that acute inflation, which could cause rapid relative price changes, may have a greater impact on the economy. Panelist Uchida noted that the main cause of the rise in domestic energy prices was the increase in dollar-denominated prices and that monetary policy could have only a small impact.

(On monetary policy responses)

Moderator Aoki asked panelist Tsutomu Watanabe whether there was a difference between controlling expectations when there was a cost-push shock and when there was insufficient demand under zero interest rates. Tsutomu Watanabe responded that unlike when there was insufficient demand under zero interest rates, a cost-push shock created a tradeoff between stabilizing the output gap and inflation, so the issue was in which

direction to steer expectations. He continued that since in the case of the US it was sufficient to deal with "acute inflation" only, it would be sufficient to push down inflation expectations through a commitment to monetary tightening; however, since in Japan's case it was necessary to deal with "chronic deflation" at the same time, it was not simply a matter of making a commitment to monetary tightening.

Panelist Uchida asked whether, given the current outlook for economic activity and prices, there would not be a significant risk of stagflation even if monetary policy did not respond to high commodity prices. Panelist Kobayashi observed that if the impact of a cost-push shock was not particularly severe, it would be desirable to maintain the current policy while closely monitoring price developments. Moreover, he reiterated his view that it would be appropriate to respond to rising energy prices with fiscal policy. Panelist Tsutomu Watanabe argued that if energy price hikes were left unaddressed, this was likely to lead households to cut back spending, pushing down prices, and leading to an increase in items near zero in the price change distribution; in other words, deflationary pressures would intensify. Uchida noted that the more likely impact of energy price hikes was the one pointed out by Tsutomu Watanabe, adding that if there was a mechanism through which acute inflation could act as a "bridge" toward overcoming chronic deflation, it would be that service prices are pushed up through higher wages.

Ueda asked for views on the relationship between the delay in interest rate hikes in the US and the Fed's newly adopted average inflation targeting policy, as well as the risk of future US inflation exceeding policy makers' forecasts. Panelist Uchida noted that the commitment to an average inflation rate of 2 percent had been achieved and that the average inflation targeting itself had not been a constraint on policy conduct, although it was true that central banks in the US and Europe had been keenly aware of the risks of deflation and a "Japanification." Moreover, Nakata pointed out that the fear of deflation rather than inflation may have been behind the delay in raising interest rates. Panelist Tsutomu Watanabe observed that the Fed initially misjudged developments in the labor force participation rate and thought that the increase in inflation was temporary; however, now that the Fed was examining developments in the labor force participation rate carefully, it was unlikely that it would misjudge future inflation developments.

Nakata noted that although Japan had not yet been able to achieve its price stability target, the fact that the rate of consumer price inflation had remained stable to the extent that people did not care about it could be regarded as a good thing.

(On measures to stimulate demand other than monetary and fiscal policies)

Referring to Olivier Blanchard's proposal of "alternative ways of boosting demand"² as a remedy for Japan's economy, Junko Koeda asked whether there were ways to stimulate demand other than monetary and fiscal policies. Panelist Tsutomu Watanabe, while mentioning that he was not aware of the details of Blanchard's proposal, noted that income tax cuts financed by a consumption tax hike, as proposed by Martin Feldstein and subsequently refined theoretically,³ could be regarded as a non-fiscal policy since it was revenue neutral, and that this might be an effective policy response to overcome "chronic deflation."

4.3 Panelists' closing comments

Finally, the panelists provided closing comments on the discussion.

Panelist Tsutomu Watanabe highlighted the need for a better understanding that "chronic deflation" and "acute inflation" did not cancel each other out well and required different responses. Moreover, he expressed concern that the economic costs of chronic deflation were more easily underestimated than those of acute inflation and noted that it was important for society as a whole to understand the need to respond appropriately to chronic deflation as well.

Panelist Kobayashi observed that the pandemic had added one more factor contributing to Japan's chronic deflation and argued that the country as a whole should proceed with healthcare system reforms to counter the pandemic, which would also reduce the factors contributing to chronic deflation.

Panelist Uchida noted that several participants at the workshop had suggested that the current situation in which people pay no attention to inflation may be desirable. He argued that the reason why a price stability target of 2 percent was preferable to one of zero percent was the existence of the effective lower bound on nominal interest rates and the fact that it contributed to stabilizing exchange rates as a result of central banks around the world sharing the same target. He pointed out, however, that all policies had costs and that the real question was whether the effects and costs of policies were balanced. In this regard, he observed that while many experts had suggested that current accommodative

² Blanchard, Olivier (2021) "Why Low Interest Rates Force Us to Revisit the Scope and Role of Fiscal Policy: 45 Takeaways," <https://www.piie.com/blogs/realtime-economic-issues-watch/why-low-interest-rates-force-us-revisit-scope-and-role-fiscal>

³ Correia, Isabel, Emmanuel Farhi, Juan Pablo Nicolini, and Pedro Teles (2013) "Unconventional Fiscal Policy at the Zero Bound," *American Economic Review*, Vol. 103(4), pp. 1172-1211.

policies carry the risk of giving rise to financial imbalances, in order to address such risk in the actual conduct of monetary policy, more practical and sophisticated analyses and further theoretical advances were desirable.

5. Closing Remarks

In closing, Wakatabe looked back at the presentations and panel discussion at the workshop, summing them up by observing that the workshop had provided lively and meaningful discussions on the characteristics of price developments in Japan, and had offered many useful insights for the future conduct of monetary policy. He pointed out that the three topics discussed at the "Bank of Japan Workshop on Price Stability" in 2001—price measurement issues, the definition of price stability, and desirable monetary policy conduct—were discussed at the current workshop again, and noted that these were issues that central banks should examine continuously.

As a concrete example with regard to statistical issues, including the measurement of prices, Wakatabe observed that the segmentation between the rental and owner-occupied housing markets highlighted by Chihiro Shimizu had been a topic of investigation for 20 years and was also discussed at the "Bank of Japan Workshop on Price Stability" in 2001.

Regarding the definition of price stability, Wakatabe noted that it was important to consider the relationship between the notion of price stability stated by former Federal Reserve Chair Greenspan as a situation where "households and businesses need not factor expectations of changes in the average level of prices into their decisions," which was also referred to at the "Bank of Japan Workshop on Price Stability," and the concept of "rational inattention" referred to in the current workshop. In other words, even if it was rational for economic agents not to pay attention to price changes when the rate of consumer price inflation was hovering near zero, whether such a state was optimal in terms of social welfare was an issue that central banks should fully consider. In this connection, he noted that the discussion by Kobayashi and Tsutomu Watanabe on the link between wages and prices was thought-provoking and that for price stability to be achieved, it was necessary to reach a state of equilibrium where inflation and inflation expectations were around 2 percent and wage growth taking labor productivity growth into account remained stable at around 3 percent.

Regarding desirable monetary policy conduct, Wakatabe argued that there was little need to change the conventional view that while it was appropriate to respond to aggregate demand shocks with monetary policy, responding to aggregate supply shocks with monetary policy might not be appropriate. He also noted that it was important to

consider monetary policy conduct in light of the situation at any given time and without preconceptions, keeping in mind the keyword "humble" mentioned by Amamiya in his opening remarks. Specifically, he argued that what policy response was desirable depended on the balance of future risks we should be concerned about, such as the risk that a situation which overseas central banks and others have described as a "Japanification" was becoming the norm in Japan, the risk of a return of the high inflation of the 1970s, or the risk of a return to a situation like during the interwar period. Further, he observed that on the one hand, the recent increases in energy and food prices could exert downward pressure on prices through the demand side; on the other hand, they may increase people's perception of inflation due to the frequency with which they purchase such goods. He argued that central banks should pay attention to their communication at a time when the direction of risk was uncertain.

Finally, he concluded by reiterating the importance of the three aforementioned issues (price measurement issues, the definition of price stability, and desirable monetary policy conduct), and expressed his hope that forums for the exchange of views with specialists and scholars in economics and empirical analysis would be held regularly in the future and that through discussions at these forums, including the second workshop on May 30, a deeper understanding of various issues surrounding price developments would be achieved.

Characteristics of Price Developments in Japan
The First Workshop on "Issues Surrounding Price Developments
during the COVID-19 Pandemic"

Conference Date: Tuesday, March 29, 2022

Venue: Conference Room A, Bank of Japan

Program

13:00-13:20 Opening Remarks Masayoshi Amamiya Bank of Japan

Session 1 Characteristics of Inflation Dynamics in Japan in Recent Years

13:20-14:30	Presenters	Yoshitaka Ichise	Bank of Japan
		Takuji Kawamoto	Bank of Japan
	Discussants	Etsuro Shioji	Hitotsubashi University
		Masayuki Morikawa	Hitotsubashi University and RIETI

14:30-14:45 Coffee Break

Session 2 Service Prices in the CPI: Focusing Mainly on Rents

14:45-16:00	Presenters	Yuto Iwasaki	Bank of Japan
		Takushi Kurozumi	Bank of Japan
	Discussants	Takashi Unayama	Kyoto University
		Chihiro Shimizu	Nihon University

16:00-16:15 Coffee Break

Session 3 Panel Discussion: Post-COVID Price Developments

16:15-17:45	Moderator	Kosuke Aoki	University of Tokyo
	Panelists	Keiichiro Kobayashi	Keio University
		Tsutomu Watanabe	University of Tokyo
		Shinichi Uchida	Bank of Japan

17:45-18:00 Closing Remarks Masazumi Wakatabe Bank of Japan

Overall Moderator Seiichi Shimizu Bank of Japan

* Sessions 1 and 2 consist of approximately 30 minutes of presentation, 10 minutes of comment by each discussant, and 25 minutes of floor discussion (including responses from presenters).

List of External Participants and Speakers from the Bank of Japan
(in alphabetical order, titles omitted, affiliations current at the time of the workshop)

Name	Affiliation
Masayoshi Amamiya	Bank of Japan
Kosuke Aoki	University of Tokyo
Shin-ichi Fukuda	University of Tokyo
Yoshitaka Ichise	Bank of Japan
Yuto Iwasaki	Bank of Japan
Ryo Jinnai	Hitotsubashi University
Seisaku Kameda	Bank of Japan
Takuji Kawamoto	Bank of Japan
Keiichiro Kobayashi	Keio University
Junko Koeda	Waseda University
Haruhiko Kuroda	Bank of Japan
Takushi Kurozumi	Bank of Japan
Masayuki Morikawa	Hitotsubashi University and RIETI
Taisuke Nakata	University of Tokyo
Chihiro Shimizu	Nihon University
Seiichi Shimizu	Bank of Japan
Mototsugu Shintani	University of Tokyo
Etsuro Shioji	Hitotsubashi University
Shinichi Uchida	Bank of Japan
Kazuo Ueda	Kyoritsu Women's University
Takashi Unayama	Kyoto University
Masazumi Wakatabe	Bank of Japan
Tsutomu Watanabe	University of Tokyo
Yasutora Watanabe	University of Tokyo