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Inflation and Deflation in East Asia

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Editors

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Preface and Acknowledgements

Not long ago, inflation was considered an “extinct volcano” by numerous economists and monetary policy-makers. Indeed, when the conferences on “Inflation and Deflation in East Asia” were envisioned in early 2021, topics related to deflation were still in most people’s minds. This had thoroughly changed by spring 2022, when leading experts from academia as well as monetary authorities finally assembled for the events in Seoul and Ludwigshafen to explore economic, legal, and policy perspectives of price stability in East Asia. Selected papers delivered at the conferences formed the basis for this book.

The conferences were organised by the *East Asia Institute* in Ludwigshafen, Germany, and by the *KDI School of Public Policy and Management* in Seoul, Korea. Generous support was granted by the *Deutsche Bundesbank* and the *German Institute for Japanese Studies in Tokyo*, which is gratefully acknowledged. Likewise, we wish to thank Springer Nature for accepting this volume into its series entitled *Financial and Monetary Policy Studies*. Finally, we are indebted to Chris Engert in Florence for his excellent work in the language correction and copy-editing of the manuscript.

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Moritz Bälz holds the Chair of Japanese Law and its Cultural Foundations at the Goethe University, Frankfurt am Main, where he has also served as Executive Director of the Interdisciplinary Centre for East Asian Studies (IZO) (2008–2010 and 2017–2019). Prior to being appointed professor, he worked as an attorney with the international law firm Freshfields Bruckhaus Deringer in New York and Frankfurt (2003–2008) and was Joseph Story Research Fellow at Harvard Law School (2002–2003). He is co-editor of the *Journal of Japanese Law (J.Japan.L)* and has published widely on topics of Japanese business law.

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Abbreviations

AIC	Akaike Information Criterion
APCF	Asia Pacific Consensus Forecasts
APP	Asset Purchase Programmes
BIC	Bayesian Information Criterion
BIS	Bank for International Settlements
BoJ	Bank of Japan
BoK	Bank of Korea
BverfG	<i>Bundesverfassungsgericht</i> (German Constitutional Court)
CBC	Central Bank of the Republic of China (Taiwan)
CEIC	Computer and Enterprise Investigations Conference
CJEU	Court of Justice of the European Union
CME	Comprehensive Monetary Easing
Covid-19	Coronavirus Disease 2019
CPI	Consumer Price Index
CS	<i>Chonse</i> i System (KOR)
CSI	<i>Chonse</i> i System Index (KOR)
CSPP	Commercial Sector Purchase Programme
DGBAS	Directorate-General of Budget, Accounting and Statistics (BRA)
EA	Euro Area
ECB	European Central Bank
ESCB	European System of Central Banks
ETF	Exchange-Traded Fund
EU	European Union
Fed	US Federal Reserve
FRB	Federal Reserve Bank
GCEE	German Council of Economic Experts
GDP	Gross Domestic Product
GFC	Great Financial Crisis
GFCC	German Federal Constitutional Court
HCS	Hybrid <i>Chonse</i> i System (KOR)
HICP	Harmonised Index of Consumer Prices

IAS	International Accounting Standards
IASB	International Accounting Standards Board
IMF	International Monetary Fund
IT	Information Technology
JGB	Japanese Government Bonds
JPY	Japanese <i>Yen</i>
J-REITs	Japan Real Estate Investment Trusts
KAB	Korean Appraisal Board
KRW	Korean <i>Won</i>
KSO	Korean Statistics Office
LDP	Liberal Democratic Party (JPN)
LIBOR	London Interbank Offered Rate
LTV	Loan-to-Value
MAS	Monetary Authority of Singapore
MMT	Modern Money Theory
MPS	Monetary Policy Statement
MRI	Monthly Lease/Rent Index
MRO	Monthly Rent Only
MW	Million <i>Won</i> (KOR)
NDC	National Development Council
NEER	Nominal Effective Exchange Rate
NTD/NT\$	New Taiwan Dollar
OECD	Organisation for Economic Co-operation and Development
OER	Owners' Equivalent Rent
PCE	Personal Consumption Expenditure
PEPP	Pandemic Emergency Purchase Programme
PP	Percentage Points
PPI	Producer Price Index
PRC	People's Republic of China
PSPP	Public Sector Purchase Programme
QE	Quantitative Easing
QEE	Quantitative and Qualitative Easing
ROC	Republic of China
S\$NEER	Singapore Dollar Effective Exchange Rate
SARS	Severe Acute Respiratory Syndrome
SIBOR	Singapore Interbank Offered Rate
SPF	Survey of Professional Forecasters
TEU	Treaty on European Union
TFEU	Treaty on the Functioning of the European Union
TIPS	Treasury Inflation-Protected Securities
TPI	Transmission Protection Instrument
ULC	Unit Labour Cost
UMP	Unconventional Monetary Policy
US/USA	United States of America
USD	United States Dollar

VAR	Vector Auto-regression
WPI	Wholesale Price Index
YCC	Yield Curve Control

Chapter 1

Measuring and Fighting for Price Stability in Turbulent Times: Lessons from East Asia



Frank Rövekamp, Moritz Bälz, Hanns Günther Hilpert, and Wook Sohn

Abstract The preservation of price stability requires the correct measurement of inflation rates, appropriate economic policies to fight inflation or deflation and a legal framework, which defines the tools and boundaries of monetary policy. This chapter summarizes the respective concepts and experiences in East Asian economies like Japan, Korea, Singapore and Taiwan.

1.1 Introduction

Ever since the financial crisis of 2008/09, fear of deflation has shaped the monetary policy of the major economies. In order to fight deflationary tendencies, policy interest rates were reduced to zero, or near to zero. When that failed to raise inflation rates, a bunch of so-called unconventional monetary policies (UMPs) was devised, which, at its core, involved the hitherto taboo buying of government bonds on a grand scale to provide ample liquidity to the markets. Japan served as a kind of model here, as the Bank of Japan had experimented with these kinds of policies from the end of

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the 1990s.¹ Notwithstanding this, inflation rates still did not reach the targeted levels, usually set at 2%, even though the balance sheets of the Federal Reserve Board, the European Central Bank, the Bank of Japan, and other central banks grew to historical proportions.

As conventional monetary theory was at a loss to explain the apparently broken connection between the monetary base or the stock of money and inflation rates, new theoretical constructs such as “Modern Monetary Theory” also gained some traction. “Modern Monetary Theory” specifically denied that state debt directly or indirectly financed by a central bank would necessarily lead to inflationary pressure. It has even promoted this way of state financing and dismissed old-fashioned concerns in this regard.²

The advent of the Covid-19 pandemic in 2020 did not, at first, fundamentally change the outlook. Inflation rates picked up mainly as a result of global supply-chain disruptions. But this effect was mostly considered as temporary, because the end of the pandemic would also bring about a solution to the logistical problems and inflationary pressure would wane at the end. At the same time, state deficits, indirectly often financed by central banks, soared again because of the aid packages provided for the Covid-19 riven economies. Nevertheless, the outlook for inflation rates remained mild, and most forecasts predicted a return to pre-pandemic levels.³

The war in Ukraine sparked by the Russian attack in February 2022, combined with the entrenched zero-Covid policy of China, has fundamentally changed the outlook. Energy and commodity prices have soared, and, this time, the supply shock is not considered as being likely to bottom out quickly. Inflation rates have reached two-digit levels in the US as well as in the Eurozone, and, even in Japan, which had, for so long, seemed to be immune to any substantial price rises,⁴ the targeted 2% inflation rate was quickly exceeded.

It is still open to what extent the current situation will lead to an inflationary circle, in which the initial supply shock will lead to substantial wage increases, which, in turn, will further feed price increases and raise inflation expectations. But most major central banks have woken up to the threat, and have reacted with a tightening of monetary policy by raising interest rates and by putting the end of the bond-buying programmes in their sights. It appears that the coming period will be characterised by high uncertainty, in which neither old-fashioned nor “modern”, monetary theory can serve as clear guidance.

In this environment, the consideration of fundamental matters such as the appropriate measuring of inflation, the current practical experiences of the struggle to preserve price stability, and the legal limitations on monetary policy can provide hints for the further development of monetary theory, as well as for the practical

¹ Geithner (2014: 36–45).

² Ehns and Höfgen (2022).

³ For the Eurozone even in Q1 2022, the professional forecasters saw inflation rates below 2% for the next five years; available at: https://www.ecb.europa.eu/stats/ecb_surveys/survey_of_professional_forecasters/html/table_hist_core.en.html.

⁴ Kuroda (2022).

conduct of monetary policy. These issues are all taken up by the contributions in this volume.

In the context of the issue of measuring inflation rates properly, it appears that officially published data are rarely questioned, and mostly treated as though their calculation was as uncritical as the statistics on population or on foreign reserves. **Kenichi Shimizu** points out, however, that the declared inflation rates may significantly vary depending on the method of accounting for technological innovation and improved product properties. International comparability is impaired, furthermore, by the fact that different countries use different adjustment methods to account for advances in quality.

To prove his point, Shimizu analyses the effect of digital and electronic products on the consumer price indices (CPIs) of Germany, the US, Singapore, and Japan. These goods have a weight of 6–15% in the product baskets of the respective countries. Technological innovation in this field has been very rapid in the last few years and over the last decades. In principle, an improved and better-performing product, a personal computer, for example, will enter the CPI calculation as “cheaper” than its preceding version, although the actual market price remains the same. The extent of the hypothetical “price reduction”, however, varies greatly according to the method applied. In the decade, from 2005 to 2015, for example, the hypothetical price of television sets decreased dramatically in the US, whereas it stayed rather flat in Japan. Different adjustment methods to account for quality improvements caused this gap. However, the actual prices between these countries did not greatly differ.

The analysis shows that the hypothetical price reductions in these technologically quickly developing product categories lead to a significant underestimation of the inflation rate in all four countries. The gap reaches up to 0.5% in Singapore (2011), 0.6% in Germany (2001), 0.7% in Japan (2011), and the US (2009). Because of the different methodology used, on the other hand, the actual degree of inflation-rate underestimation is not exactly comparable among the countries.

As the inflation rate is the core reference for monetary authorities, and greatly influences exchange rates, the above problems may seriously distort monetary policy and international investment flows, among others. In order to soften or mend the effects of this, greater transparency about the quality-adjustment methodology of the countries and international harmonisation is called for. Furthermore, multiple types of inflation statistics may be used for different purposes: a CPI product basket for the adjustment of pension payments, for example, may be better without rapidly evolving digital goods with their artificially price-dampening effect. A GDP deflator, on the other hand, certainly should include all product categories.

A different way, how a CPI may misstate the actual rate of inflation, is analysed by **Woosik Moon**, for the case of Korea. Korea had faced low inflation in the period of 2012–17 despite an expansionary monetary policy. An inflation target of 3% was set in 2015, but, measured by the conventional CPI, it remained at about 1% in 2016. This even caused speculation about possible deflationary pressure, similar to that of Japan.

The CPI, as calculated in Korea, may not, however, reflect the real inflation rate correctly; the analysis of the peculiarities in the Korean housing market reveals a major deficiency in the calculation formula.

Renting a flat or house and paying a monthly fixed rent for this, as in most other countries, is rather exceptional in Korea. Instead, the so-called “*chonsei*” system is used, in which the tenant pays a large upfront sum to the landlord. The flow of interest income from this principal substitutes the rent. The *chonsei* system is widely used both in its pure form and in its hybrid variant, in which the upfront payment and the accorded interest payments are lower, but complemented by monthly fixed payments.

The *chonsei* system is the reason why low interest rates usually lead to rental inflation, which, however, is not reflected in the official CPI figures. This is because lower interest rates will induce landlords to request higher upfront payments so that the stream of interest payments as a substitute for rent remains the same. As the official CPI does not capture this effect, the size and persistence of inflation tends to be underestimated.

Moon sets out to estimate this effect by using the publicly available data, and comes to the conclusion that, in 2016, the official CPI under-stated the inflation rate by 0.5%. The effect becomes even more pronounced when a hypothetical rent is calculated for properties occupied by their owners. Such rents are not considered in the CPI, but, if they were, the true inflation rate by the end of 2015 would have been 3%, more than double the official figure.

Moon concludes that relying on the official CPI induces the monetary authorities to adopt an overly expansionary monetary policy. As the prices of important services, such as public transportation or electricity, are regulated and adjusted based upon the CPI, its defects cause further distortions in the economy. Monetary authorities should thus be cautious about basing their monetary policy decisions purely on one, standard CPI.

Whatever the closest measure to reflect the inflation rate as realistically as possible is, there is consensus among economists that the distortion of prices, windfall profits for debtors, and losses for creditors are important negative consequences of inflation. This is generally not seen as a critical issue, however, as long as inflation rates are “low”, i.e., stay within the realms of 2–3%. **Raquel Sarquis and Arioaldo dos Santos** disagree, however, and argue that such low inflation rates can also seriously distort financial reporting, and thus mis-represent the financial status of an enterprise. Accordingly, they call for measures to reflect the effects of inflation on balance sheets even in low inflation environments.

To demonstrate their case, Sarquis and dos Santos take recourse to the Brazilian model for recognising inflation in financial statements and apply it to Korea as a low inflation country. Brazil has a long history of high and even hyperinflation, and consequently various tools have been devised there to deal with the effects in business transactions. The Brazilian model for financial statements follows very simple valuation principles for assets and liabilities under inflationary conditions. For monetary assets, a loss is registered as they are of less value, even if they nominally stay the same. Also, monetary liabilities are of less value and a gain is recorded

accordingly. Non-monetary assets gain in value by inflation, which results in revenue, whereas the same effect for non-monetary liabilities (equity) leads to expenses. All effects are registered in an inflation adjustment account and the total amount is added or subtracted from the company's income.

Actually, the Brazilian model has been developed for high inflation rates of 10% and beyond, but applying it to the financial statements of companies in low inflation environments shows that low inflation rates can also seriously distort the informative value of financial statements. Sarquis and dos Santos take the case of 16 listed Korean companies and construct two cases for the business year 2020, one for an inflation rate of 0.54%, and the other with one of 2.3%. In all cases, the inflation-adjusted earnings deviate significantly from the nominal earnings. In case of Korean Airlines Co., for example, negative earnings of 230 million KRW turn into positive earnings of 211 million KRW, if the Brazilian model is applied for the inflation rate of 2.3%. Mechanisms for recognising inflation in financial statements may, therefore, also be useful in low inflationary environments in order to prevent material misstatements.

Notwithstanding the issues of measuring inflation rates and their effects as realistically as possible, there is no doubt that the current global upsurge in prices poses a real problem and needs to be dealt with vigorously. Small and open economies, in particular, are highly vulnerable in such an environment and their experiences may bear important lessons for other countries.

Hwee Kwan Chow stresses the connection between inflation expectations and inflation dynamics. She shows how this manifests itself in the case of Singapore. Since Singapore is a small and open economy, which depends, to a large degree, on foreign trade, the operating tool of monetary policy is not the interest rate, but the exchange rate. The Monetary Authority of Singapore (MAS) pegs the Singapore Dollar (S\$) to a basket of other important currencies. In the event of high inflation, the MAS tightens monetary policy by guiding the S\$ towards appreciation. A higher value of the S\$ provides for cheaper imports and further cools down the local economy by the increased competition for local companies. In the event of a weak economy accompanied by low inflation, on the other hand, a depreciation of the S\$ is induced.

Looking at the track record of monetary policy, it appears that the above straight-forward and transparent approach has been largely successful ever since the mid-1970s. Episodes of low economic activity with low or even negative inflation, as in the period after the Asian crisis of 1997/98, were accompanied by a steady devaluation of the S\$ until recovery set in. When prices rose quickly between 2005 and 2010, on the other hand, the S\$ appreciated until the inflationary trend was arrested. The policy framework even worked well during the Covid-19 crisis, which affected the economy severely. Monetary policy was loosened in 2020 and the S\$ depreciated, but, already in October 2021, the MAS reacted with a tightening against rising external and internal price pressure.

The successful track record of monetary policy by the MAS has led to well-anchored inflation expectations, as reflected by the regular Survey of Professional Forecasters (SPF). Disagreements among the forecasters have been consistently low.

Things have changed, however, with the onset of the Ukrainian war, which caused a soaring of global energy, commodity, and food prices. The SPF changed its outlook