Commentary: The Myth of Normal: The Bumpy Story of Inflation and Monetary Policy

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FAUST: *Ah! Now I've done Philosophy,*
I've finished Law and Medicine,
And sadly even Theology:
…
No wiser than I was before:
Master, Doctor's what they call me,
…
And see that we can know - nothing!

From *Faust* by Johann Wolfgang von Geothe[1]

Prologue

I found this paper to be a difficult one to discuss. The authors cover so many topics: they question existing views on normalcy, inflation forecasting and the ability of the central bank to steer the economy toward a better outcome. They have two acronyms as key concepts of the paper: Noninflationary Consistently Expansionary, as the central bank's objective, NICE, and Disparate Confounding Dynamics, or

DCD. They seem to criticize the conventional views that do not take into account DCD, but without proposing detailed alternatives; and they point out mistakes of the past Federal Reserve Bank (FRB) policies, but without suggesting new policies. I found the paper very philosophical.

The paper consists of three parts: Sections I-III, criticizing what they call the NICE view; Sections IV-V, reflecting on the economic movements since 1850; and Sections VI-VII, proposing what to do, given the criticism presented in Sections I-III.

Act I

I will first explain my view of the current controversy over inflation dynamics and monetary policy in the United States, which is also applicable to Japan, the United Kingdom and Europe, and put the Faust-Leeper paper in that context.

Pre-Crisis (NICE) period: early 1990s to 2007. This includes the Great Moderation (mid-1980s to mid-2000s), when the inflation rate (π) came down with expanding output and less volatility. It should be pointed out that the real interest rate (r) started to decline in this period.

Crisis period: 2007 to 2010. The U.S. policymakers adopted the zero-interest policy rate and quantitative easing, as the inflation rate approached zero and the growth rate sank below zero.

Post-crisis period: 2010 to 2015. The recovery; π, g and r remain low.

The conventional view is that the pre-crisis period was a triumph of monetary policy with flexible inflation targeting (FIT). The fundamental cause of the crisis was a failure of financial supervision. According to this view, it is appropriate to blame the U.S. Securities and Exchange Commission, insurance supervisors, Basel II, the U.K. Financial Services Authority, and others, but not monetary policy, per se. Given the crisis, FRB responses were quick, decisive and appropriate—partly thanks to Section 13-3 of the Federal Reserve Act. Low π, g and r after the crisis were due to a very slow recovery, and not uncommon for countries that experienced a financial

crisis—according to Rogoff and Reinhart. The world will go back to "normal and nice," although it may take a few more years.

The BIS-Taylor view is that monetary policy during the NICE period is to blame. FRB kept the policy rate too low for too long; or, put differently, the rate was raised too slowly between 2004 and 2006, which spawned the subprime bubble. FIT is not enough. Asset prices—equity prices and real estate prices—should be included in the objective variables along with π, and Y, as well as just monitored in the forecasting of future π and Y.

The secular stagnation view is that the post-crisis period may be different from the NICE period, and this may be called a new normal. Low π, g and r may continue for an indefinite period. Some blame a permanent lack of demand (demography?); and some blame a lack of innovation (low total factor productivity).

The Faust-Leeper paper breaks new ground, criticizing the NICE period, but for a very different reason from the Bank for International Settlements view. It asserts that the post-crisis world will be different from a return to normalcy (or the NICE view), but for a different reason from the secular stagnation view.

Faust and Leeper believe that "NICE and normal" exist only in the eye of the beholder; elaborate macroeconomic forecasting, which is the basis of forward-looking FIT, is no better than the linear projection between now and the target date (Faust and Wright). Even where we are "now" is not certain, as data collection and aggregation takes time. However, "now-casting" is getting better as real-time big data have become available and analyzable.

In a word, they argue that we do not know what "normal" is or what "NICE" is; and "forecasting" by elaborate models is no better than a simple interpolation between "now" and the target.

Faust and Leeper explain why "normal" may change over time and forecasting becomes misleading due to DCD. The fundamental mistake of monetary policy is not realizing how DCD affects the inflation (π) and slack ($Y-Y^*$) dynamics. Those who are responsible for monetary policy should be aware of the importance of DCD.

What is DCD? They explain: "Aggregate inflation and real-side dynamics reflect disparate and persistent movement of myriad variables, and the policy implications of these movements are not well captured by two (or a very small number of) conventional summary statistics for headline aggregates such as inflation and real activity." Also: "*confounding* [sic] refers to complicating any conventional interpretation of normal cyclical dynamics and the assessment of appropriate monetary policy."

So, it seems that DCD is a wide range of variables that have long-run variable trends (low frequency changes), and have important implications on π, g, (Y-Y*) and r.

Their examples of DCD include productivity and output growth, the relative differences among sectoral inflation rates, the debt/income ratio of various sectors and the term and risk premia in financial markets. They also show as DCD variables the time series of the ratio of credit market debt of households and nonprofits to personal disposable income (Chart 1); the Labor Share of Income (Section VII.i); Demographics (Section VII.ii); and Fiscal sustainability (Section VII.iii).

So, as a discussant, I play the role of devil's advocate and attempt to defend the NICE view:

1. The NICE people have known the phenomenon of DCD, without it being so named. Since it is slow moving, it should not affect the short-run decision of monetary policy making. In the framework of the Phillips curve, DCD will affect the position of the vertical long-run Phillips curve, u*, and the slope of the short-run Phillips curve. But, they are slow moving. Hence, the central banks should be able to detect the changes by, say, time-varying coefficient SVAR—Leeper's territory.

2. Faust and Leeper say "In short, the nice view seems to involve a strong presumption that central banks can and should assiduously focus on simple, systematic behavior that stabilize inflation." Then, they criticize a NICE-view assumption by saying that it is not easy to separate the stochastic trend and cycles in real time. Examples are the debt-income ratio and term premia in sovereign debt markets. The

NICE-view people would say, "We all know all that." The models allow uncertainties and time-varying trends. Models are estimated and re-estimated every quarter. Several models are estimated for robustness and model uncertainty.

3. Faust and Leeper say that even the headline (or core) inflation rate, π, may not escape the DCD problem. Some categories of CPI, like "medical" and "housing and utilities," are consistently above the target (2 percent) and goods prices have been declining—and this is DCD—while the inflation rate of all goods and services was 1.95 percent during 1995-2005. Think about the headline inflation rate: It is affected by oil price increases or decreases. They ask: "What about when headline inflation falls because the relative price of other goods falls relative to the overall measure, as in the early 2000s? Should the central bank seek to boost the inflation in other categories in order to stabilize the headline index? There is not a clear answer from the nice view models because they omit all of this variation." The NICE-view people would say, "Don't worry, we know the answer." A trend of relative price changes is well known; the central bank's role is not to respond to the relative price movement but to the average, overall price movement. That is what "anchoring expectation" is about. About the headline inflation under the influence of oil prices, the central bank will be patient to see how long and how much the decline of oil prices will last. Faust and Leeper would rebut: "Ah, that is precisely the point. The central banks cannot differentiate between the trend and the cycle. How much of the oil price decline is a trend and a cycle, we do not know." The NICE people would reply by saying that, "Even in the case of unclear distinction between a trend and cycle, anchoring the inflation expectation does stabilize the economy, while the question of a trend vs. a cycle is examined."

4. So, what should the central bank do? Milton Friedman's position was that monetary policy cannot be fine-tuned because of long and variable lags. He would say that it would be desirable to have price stability (and to lessen the volatility), but the central bank is ill-equipped to make it so. As a second-best option, Friedman proposed the k-percent rule. The new classical models that embody Rational Expectations, á la Sargent and Wallace, would say that

the central bank is the source of the noise. The first-best option is that monetary policy does not attempt to lessen the amplitude of cycles. The New Keynesian DSGE model with FIT—say, the NICE people—would assert that anchoring inflation expectation is most important. There are short-run variations around (u^*, π^*), but the central bank should and can minimize those variations by monetary policy tools with a forecast path of future u and π. Various policies—not just the policy interest rate but quantitative easing—are chosen carefully, by looking at many other variables as well as by looking at the source of shocks. Faust and Leeper would say, "No. One cannot forecast reliably; what you think you are targeting, say π, may not be what you think you are targeting, and you will be mistaken if you ignore DCD." They would argue that many economic variables continue to exhibit stochastic trends and variable cycles, then it is hopeless to fine-tune monetary policy.

5. Faust and Leeper deny the ability of the central bank to conduct elaborate forecasting because, "There are multiple and shifting trend and cycle components." They cite an earlier work of Faust and Wright that the alternative of simple interpolation—a line from the current state to the target—is as good as any of the more elaborate or official forecasts of central banks. The NICE people would say, "Not so fast. The actual path is a result of policy with recursive forecasting and actions. It is not surprising that the results tend to follow a gradual convergence toward the target." The "projections" of FRB and other central banks are based on the policy rate path of market expectations. But, internally, the central banks, or each member of the Monetary Policy Committee, may have different projections. Projections are not exactly forecasts.

Well, then what do Faust and Leeper recommend that the central bank do?

Act II

Sections IV and V are in search of "normal" (just as Faust and Mephistopheles went off to find love and youth), covering the period from 1850 to the present. They divide the period spanning more

than 150 years into four periods: (i) 1850-1971; (ii) 1965-1995; (iii) 1995-2005 (NICE); and (iv) 2005-present. It seems the authors would like to assert that what is considered "normal" has changed over these periods; and the typical NICE period was rather short. For example, in reference to the first subperiod, "long periods of deflation were familiar features of the gold standard, … and [some periods of deflations] were more normal or even boom times." The second subperiod was characterized as a period of Great Inflation and disinflation. Policy errors were to blame for the Great Inflation, and correction of the errors, based on the realization of the costs of inflation, would explain disinflation.

The third subperiod, 1995-2005, is examined in Section V. The period is conventionally viewed as a typical NICE period. The authors, however, insist that the period is neither NICE nor normal. They criticize the Greenspan-led Federal Open Market Committee (FOMC) as ignoring signs of overheating. The authors insist that FOMC "forbearance" was not something the NICE view would support. The dot-com bubble occurred and burst. In order to prevent the economy from going into deflation, the policy rate was lowered to 1 percent by 2002. In the process of raising the rate from 2004 to 2006, "conundrum"—that is, the long rate not rising along with the policy rate—occurred. Again, tightening was too little and too slow. With the benefit of hindsight, ignoring asset price increases and forecast errors on the inflation rate resulted in the subprime mortgage boom and bust.

The bottom line here is that we know nothing about what "normal" means. What is normal in one period is abnormal in another. This point is well taken. However, it may take a book or two for them to really examine the differences in the exchange rate regime, the monetary policy regime and political regimes to prove their point.

Act III

In Section VI, the authors warn the central bankers to take DCD seriously. "What is needed is to develop a more robust framework for integrating these elements systematically into policy deliberation." "[W]e are also strongly advocating that they formulate and communicate a clearer framework for how these elements are likely to affect

policy." However, their proposal lacks concrete tools and methods at this point.

Section VII is probably the most constructive section of the paper. It surveys three representative DCD variables: the labor share of income, demographics and fiscal policy. The labor share of income has been declining and that may affect monetary policy decisions. However, I am under the impression that the policymakers in Washington are already aware of this trend. They have expanded a set of labor market variables to U-3, U-6, participation rate and possibly others. Subsections on demographics and fiscal policy include more interesting examples. In both aspects, Japan offers the stage where Faust and Leeper can build their case. Unfortunately, Japan is leading the demographic transition, commonly known as aging. Japan is also a leader in the increasing trend of government debts as a result of large fiscal deficits.

Demographics

It has been extensively debated in Japan how demographics affect the economy and monetary policy. We learned two things in Japan: one with certainty, and another with some controversy.

One certain outcome of aging is to lower the potential growth rate. This is mainly from reduced labor input (on the aggregate supply side), but also from reduced investment (on the aggregate demand side) due to shrinking domestic markets that discourage new investment. It is true that, if aging is overlooked, the central bank and the government may have the wrong policy prescriptions. For example, the government may continue to employ fiscal stimulus believing that the normal growth rate is higher than the true potential. Fiscal deficits may then increase, and the economy will be overheated. Japan experienced the former but not the latter in the 1990s.

One debatable outcome of aging is its effect on inflation. The majority of economists believe that there is no definite effect of aging on inflation. The central bank can take policy to avoid deflation, even when aging is taking place and population is shrinking. I take issues with the work cited by the authors, which tends to emphasize that under aging and population declining causes prolonged deflation.

In Japan, the purpose of "Abenomics," especially the First Arrow, was a test of the Faust-Leeper thesis that deflation is inevitable in Japan. Former Governor Shirakawa tended to argue that moderate deflation may not be bad, and even natural in an aging society. The Japanese economy had been under deflation for 10 years when the global financial crisis hit. The Bank of Japan did not react to the global financial crisis, when the FRB, the Bank of England and the European Central Bank were expanding their balance sheets. The Japanese economy went into a deep recession, with yen appreciation and stock prices declining significantly. Abenomics was introduced to rectify the problem.

The First Arrow of Abenomics has two elements: establishing FIT and quantitative and qualitative easing (QQE). Lifting inflation expectations from a negative territory to 2 percent by communication, forward guidance and QQE has been a major challenge for Governor Kuroda. Nevertheless, the first 12 months was a success, as the inflation rate rose from -0.5 percent to 1.5 percent. Subsequently, the inflation rate declined, partly due to oil price declines, but the economy is out of deflation. It shows that the inflation rate can be controlled, if not precisely, even when aging is under way.

Fiscal Policy

Regarding government debt, again, Japan is ahead of all other advanced countries. The Japanese debt/GDP ratio has exceeded 240 percent, more than double that of other G-7 countries, and much higher than that of Greece, which had to restructure in recent years.

Faust and Leeper raise four issues under fiscal policy: the Ricardian equivalence, the monetary/fiscal active/passive relationship, fiscal stress and fiscal limit. These are important issues involving slow-moving variables and their impacts on the effectiveness of monetary policy. All these points are important for Japan, and fiscal sustainability has been intensively debated in Japan. However, the relationship between monetary policy and fiscal policy has not been modeled successfully with varying debt levels and fiscal limit. However, the lack of debate does not mean it is impossible.

Japan has not experienced a fiscal crisis, despite its mountain of debt. The 10-bond yield has stayed below 1 percent for many years; there is no sign of stress. Hoshi and Ito (2013, 2014) attributed these stable figures to a high domestic share of investors to Japanese government bonds; a high fiscal space, namely, room to increase the value-added tax rate from its current 8 percent to, say, 25 percent. However, with the demographic changes that are reducing the working age population and increasing retirees, domestic saving will be reduced and social security expenditures will increase. Hoshi and Ito argued that, without tax increases, a fiscal crisis will occur sometime in the early 2020s. Faust and Leeper would argue that these phenomena should be modeled into a monetary policy model. I agree with this assertion, but it is not obvious whether the next rate hike should be influenced by these considerations. It would be more constructive if Faust and Leeper suggest whether the Bank of Japan should raise the interest rate earlier or later in an aging society with increasing fiscal deficits, compared to in a non-aging society, and with what argument. It is conceivable that the central bank raises the policy rate earlier than otherwise in a recovery from a cyclical recession in an aging society, in which the potential growth rate is lower, because the inflation may happen with the lower growth rate than in a non-aging economy. But, the fiscal authority, which does not recognize the impact of aging on the potential growth rate, may counter that with fiscal stimulus. This would aggravate the problem of fiscal deficits. The interaction between demographics and the fiscal/monetary dominance issue will be a great topic to be examined, and a hint is in Section VII. These considerations may not be handled by the usual modeling of monetary policy and fiscal policy, even with the DCD variables. Faust and Leeper have tools to overcome the difficulty; we hope that they will produce a follow-up work that could help Japan avoid the hell of a fiscal crisis.

Endnote

[1]For this quote, it is appropriate to substitute "Theology" with "Econometrics." See Goethe, translated by A.S. Kline (2003).

References

Bean, Charles, Christian Broda, Takatoshi Ito and Randall Kroszner. 2015. "Low for Long? Causes and Consequences of Persistently Low Interest Rates," ICMB Geneva Report 17, October.

Faust, Jon, and Eric M. Leeper. 2016. "The Myth of Normal: The Bumpy Story of Inflation and Monetary Policy," in *Inflation Dynamics and Monetary Policy*, Federal Reserve Bank of Kansas Economic Policy Symposium, Aug. 27-29, 2015, Jackson Hole, Wyo.

Hoshi, Takeo, and Takatoshi Ito. 2014. "Defying Gravity: Can Japanese Sovereign Debt Continue to Increase Without a Crisis?" *Economic Policy*, vol. 29, issue 77, pp. 5-44.

_____, and _____. 2013. "Is the Sky the Limit? Can Japanese Government Bonds Continue to Defy Gravity?" *Asian Economic Policy Review*, vol. 8, issue 2, pp. 218-247.

Kline, A.S. 2003. Translation of *Faust* by Johann Wolfgang von Geothe. Obtained from *http://www.poetryintranslation.com/PITBR/German/Fausthome.htm.*