

Hélène Rey on the campus of the London Business School.

Jeremy Clift
talks to Hélène
Rey, professor
of economics
at the London
Business
School

N warmer days, Hélène Rey likes to scoot across Regent's Park to her work amid the white colonnades of the London Business School. She shows off her skills down the narrow corridor outside her small, book-lined office, deftly touching the back brake of the scooter's aluminum frame with her left foot as she speeds along.

"My house is just across the park, so it's convenient," says the prize-winning economics professor. "There's wild herons, bright green parakeets, and lots of ducks. Even the occasional black swan—turns out they are not so rare," she says with a chuckle. Indeed a couple of Regent's Park black swans, which traditionally mate for life, made headlines in the global media a while ago because they had to be separated by park keepers when they squabbled too much during courting.

Best-selling author Nassim Nicholas Taleb adopted the term black swan events to describe rare happenings that have major repercussions in the business and financial sectors but were completely unpredictable or thought unlikely, as black swans are in nature.

"In reality though," says Rey, "black swans are not totally abnormal," referring to the Taleb version. "I don't think big shocks are a

very unusual thing. It depends on the system and the incentives you give to people."

Going after the big issues

Rey—who lives with her husband and eightyear-old daughter in two modernized townhouses that have been knocked together—has made a reputation by challenging accepted wisdom, particularly about the international financial system, the role of the dollar, and other big macroeconomic issues. Fellow economists call her work and ideas "provocative" and "influential."

"It's the big issues in economics that have always interested me," says Rey. She is married to economist Richard Portes—also a professor at the London Business School—who founded the Centre for Economic Policy Research, a network of European economists, in 1983. "You had to do international macro to understand this stuff," she said in an interview with $F \not\leftarrow D$ in London.

"A common thread is that she's always looking for some of the deeper forces that affect the international monetary system or the financial world that we live in," says Pierre-Olivier Gourinchas, a professor at the University of California, Berkeley, who like Rey is a French national.

"Her work is characterized by patience and commitment," says Philip Lane, a professor at

Trinity College, Dublin. "She has developed large-scale, long-running projects that ultimately deliver significant advances in knowledge, rather than being satisfied with 'quick-win' research projects."

Since getting separate doctorates in the same year from the London School of Economics and the Ecole des Hautes Etudes en Sciences Sociales in Paris in 1998, she has won a string of top European prizes in economics for her thoughtprovoking research and has become an advocate for more women at senior levels of the economics profession.

"Hélène takes big ideas and then examines the data incredibly carefully to answer these big questions," said Olivier Blanchard, the IMF's chief economist. "That's the optimal combination if you want to make a mark on the profession, and she has already made a substantial mark," he observed when introducing her at a Washington research conference last year.

String of awards

Her awards include the 2006 Bernácer Prize (best European economist working in macroeconomics and finance under the age of 40) for her research on the causes and consequences of external trade and financial imbalances, the internationalization of currencies, and improving understanding of financial crises.

In 2012 she received the inaugural Birgit Grodal Award of the European Economic Association, honoring a European-based female economist who has made a significant contribution to the economics profession. And a year later, she became the first woman to win the biannual Yrjö Jahnsson Award, sharing the prize with fellow French national Thomas Piketty, well-known author of *Capital in the Twenty-First Century*, on wealth and income inequality.

Rey won the 2013 award for her original contributions to international finance, especially the determination of exchange rates and international capital flows. The committee said she had "worked on and made significant progress in studying many of the big questions in international finance that have been preoccupying economists and policymakers."

"It's the marriage of theory and empirics that makes her work so relevant for policy analysis," comments Lane.

Despite her intense involvement in economics, Rey says she is "very normal" in what she likes to do outside her professional hours. "I love reading; I love hearing—one thing about London is that the music is so good." Whenever she can she also likes to kick a ball around with her daughter or take her swimming. "Because I was raised in the countryside, I also love to go hiking in the woods or the mountains."

Changing the discussion

Rey, the daughter of a civil engineer and a teacher, grew up in central France, in the pretty market town of Brioude. She attributes her success in economics to the strong grounding she received in mathematics in the French education system. After doing her undergraduate work at a grande école in Paris, she won a scholarship to study for a master's at Stanford University in California. "So I went into the American system a bit early," she says. Rey then returned to Europe for her doctorates. She has taught at a string of elite

universities, including Princeton University and the London School of Economics, with short spells at the University of California, Berkeley and Harvard University.

Among her most influential work is the research she did with Gourinchas when she was at Princeton on the role of the United States in a globalized financial system. Blanchard says it "changed the discussion on the current account deficit in the United States."

Before the recent global financial crisis, when economists and politicians were concerned about the ballooning U.S. current account deficit, Gourinchas and Rey showed that the U.S. position was not as bad as it looked because of the country's role as the center of the international financial system.

"Although the U.S. was running a big trade deficit, economists were not taking into account the large amounts the U.S. was earning on the financial side from capital gains and changes in the value of the dollar," Gourinchas told $F \not \Leftrightarrow D$.

"For example, almost all U.S. foreign liabilities are in dollars, whereas approximately 70 percent of U.S. foreign assets are in other currencies. So a 10 percent depreciation of the dollar increases the value of foreign assets and represents a transfer of about 5.9 percent of U.S. GDP from the rest of the world to the United States. For comparison, the trade deficit on goods and services in 2004 was 5.3 percent of GDP. So these capital gains can be very large."

As Gourinchas and Rey (2005) pointed out, a depreciation of the U.S. dollar has two beneficial effects on the external position of the United States. It helps boost net exports and increases the dollar value of U.S. assets.

Gourinchas and Rey said that the U.S. position at the center of the system gave it what they called an "exorbitant privilege" (a phrase coined in the 1960s by then-French Finance Minister Valéry Giscard d'Estaing to describe the advantage the United States derived from the dollar's role as the world's reserve currency). The exorbitant privilege, Rey and Gourinchas explained, came about because the United States could borrow at a discount on world financial markets and get high yields on its external assets. They tracked how the United States had gradually taken on riskier overseas investments.

World banker, world insurer

"Then we pushed these ideas further, by pointing out that the key role of the United States makes it also look very much like an insurer for the rest of the world," Rey explains.

In the wake of World War II, the United States succeeded Great Britain as the world's banker, issuer of the main international currency, and provider of international liquidity.

This meant, in particular, being able to borrow short (foreigners were willing to purchase liquid dollar assets) and lend long (the United States supplied long-term loans and investment funds to foreign enterprises). Just like a bank, the United States could extract an intermediation margin from the differential between the higher return it received on its external assets compared with the costs of its liabilities.

Gourinchas said Washington has become more like the world's venture capitalist since the 1990s. "During the whole period, U.S. assets have shifted more and more out of long-

term bank loans toward foreign direct investment (FDI) and, since the 1990s, toward FDI and equity. At the same time, its liabilities have remained dominated by bank loans, trade credit, and debt—that is, low-yield safe assets.

"Hence, the U.S. balance sheet resembled increasingly one of a venture capitalist with high-return risky investments on the asset side. Furthermore, its leverage ratio has increased sizably over time."

Rey says they expanded on this research during the global financial crisis, finding that the United States had reversed its role by channeling resources to the rest of the world through its external portfolio—on a large scale. "Our estimate is 13 to 14 percent of U.S. GDP in 2008 alone. So that was very significant."

The United States was providing "some sort of global insurance to the world economy and the rest of the world—earning the equivalent of an insurance premium in good times and paying out in bad times. And that's exactly what we see in the data."

"While the United States enjoys an exorbitant privilege on one side," says Rey, "it also, as global insurer, has an exorbitant duty in time of crisis on the other."

Jackson Hole

A second strand of Rey's work challenges another shibboleth of economics—the idea that countries can only achieve two of the "impossible trinity" of a fixed exchange rate; an open capital market (no capital controls); and an independent monetary policy (see box).

The theory goes that in a world of free capital flows, a country can have an independent monetary policy only by having its exchange rate float (Obstfeld and Taylor, 2004).

While both emerging markets and advanced economies have increasingly opened their borders to financial flows, Rey argued in an influential speech to central bankers at Jackson Hole, Wyoming, in 2013 that the scale of financial globalization had called this theory into question.

Because many key decisions were made at the center of the system (the United States) and then exported to the rest of the world through globalization, countries can no longer insulate themselves through their exchange rate.

Instead of an impossible trinity, the world now simply faced a dilemma—independent monetary policies are possible if and only if the capital account is managed, directly or indirectly (Rey, 2013).

"The picture emerging is that of a world with powerful global financial cycles characterized by large common movements in asset prices, gross flows, and leverage [debt]," says Rey.

Whenever capital is freely mobile, the global financial cycle constrains national monetary policies regardless of the exchange rate regime.

"The belief largely is that if you have a flexible exchange rate, then that exchange rate can insulate you from financial shocks and so you can pursue your independent monetary policy. In fact, that's what inflation targeters have been arguing. But if you have a global financial cycle, like I am suggesting, then that cannot be the case: your exchange rate cannot insulate you—you cannot cut yourself off," says Rey.

What is the "impossible trinity"?

The impossible trinity, or "trilemma," suggests that it is impossible for a country to maintain simultaneously a fixed exchange rate, the free movement of capital, and an independent monetary policy.

British economist Marcus Fleming and Canadian economist Robert Mundell coauthored the Mundell-Fleming model of exchange rates in 1962 and noted that it was impossible to have domestic autonomy, fixed exchange rates, and free capital flows: no more than two of those objectives could be met.

The theory of the impossible trinity has since become one of the foundations of an open economy, given voice in the 1990s by economists Maurice Obstfeld and Alan Taylor.

At the most general level, policymakers in open economies—those that buy and sell goods and services and capital assets in global markets with a minimum of barriers—face a macroeconomic trilemma. Typically they are confronted with three often desirable, yet contradictory, objectives: stabilize the exchange rate, enjoy free international capital mobility, and engage in monetary policy oriented toward domestic goals. Because only two of the three objectives can be mutually consistent, policymakers must decide which one to give up. This is the trilemma.

"If she is right," says Gourinchas, "we have to rethink our guiding principles about how we manage monetary policy in an open economy."

"In a way, it is more of a research agenda than something that is already established," continues Gourinchas. "Hélène, in her Jackson Hole piece—and in some of her recent work— is raising a series of questions rather than supplying definitive answers."

Blanchard says Rey's research is significant. "Relative to the previous position that you could insulate yourself just by allowing the exchange rate to float, this is quite a different position. I think it is largely right and likely to be quite influential in the way we think about, say, how emerging markets should react to these sharp movements in capital flows."

Need for greater controls

Countries should react, says Rey, with stronger management and supervision of capital flows across countries because these flows have been destabilizing and helped cause crises.

In the wake of the havoc of the global financial crisis, it is hard to ascertain or measure the real gains from financial openness and freely moving capital. Indeed, Rey—who contributes to the French financial daily *Les Echos* and is also on an advisory board for the French finance minister—says the benefits of financial globalization are hard to find.

"Trillions of dollars have crossed borders, and yet despite our best efforts and hundreds of studies, it has been extraordinarily difficult for economists to identify any benefits from these flows. "Of course, it's entirely possible that parts of these flows are very beneficial. It is also highly possible that parts of the financial sector reaped large benefits. But for everyone else, hot money flows were not risk sharing but risk creating."

She argues that if these international capital flows haven't done much good, and in fact cause crises, then "we have to restrict some of them, which we can do through macroprudential policy or through capital controls. And I support the idea that everyone would be better off—except maybe some parts of the financial sector."

Macroprudential policies, reinforced following the global financial crisis, aim to contain or minimize risk originating within the financial system by taking precautionary measures in advance and improving regulation and supervision of the overall system. "Macroprudential policy has now become very important—but the question is whether or not it is going to work to prevent the next crisis."

"It's the marriage of theory and empirics that makes her work so relevant."

Recent moves to increase capital requirements for banks, along with stress-testing measures, were steps in the right direction, she says.

Uneven effects of globalization

Rey has also done work on shifts in the international financial system—the creation of the euro and the crisis in Europe, the rise of China, and the integration of the global economy into a global cycle. She was a member of a panel that made recommendations in 2011 on how to reform the international monetary system, including by strengthening the IMF and allowing it to borrow directly through commercial markets (Farhi, Gourinchas, and Rey, 2011). At present the IMF can raise money only from member governments.

Lane says her joint work on financial globalization with Philippe Martin, a professor of economics at Sciences Po in Paris, deserves more attention (Martin and Rey, 2006). The Martin-Rey collaboration developed a series of models about the implications of the integration of economies with asymmetric or unbalanced financial systems (core versus periphery economies in Europe; advanced versus emerging market economies at the global level).

"Hélène is one of the economists who has shaped the rethinking of financial globalization, taking a more nuanced view on its benefits—for example, the fact that it may generate more financial crises in emerging markets," says Martin.

"The same goes on the role of financial globalization in international adjustment and the classical trilemma. In each case, she revisited a classical and crucial issue to show that some new dimensions of financial globalization (valuation effects, the global financial cycle) should change our views on these classical questions,"

On Europe, fixing the region's legacy debt problem and introducing a more credible fiscal framework are two keys to stabilizing the euro area, says Rey.

"Putting Greece to the side—because the Greek situation is quite different from the other countries—Europe needs



Black swans in Regent's Park, London, United Kingdom.

a more credible fiscal framework. First you have to sort out the debt overhang from the crisis. You cannot enforce a more credible framework while some countries have a debt ratio of 130 percent to GDP because then they are 'too big to fail' and that's not credible."

Asked about the implications of the rise of China, Rey says it is clear that the most populous country is becoming more important in the world economy.

But it will take time for China's currency to be accepted alongside the dollar as a global currency. "China's growing very fast, but its financial infrastructure and banking system are still very undeveloped. So it will take a long time for the renminbi to become as significant as the dollar, or even overtake it.

"It's not going to happen tomorrow—that's for sure!"

Future black swans

Are there any black swans in our future? "Well, by definition, it's something we haven't thought about, or don't know much about," she says with a disarming smile.

"But there's a couple of things that are clearly worrying—the large amount of derivative positions that are out there. It's a bit of a black hole. Maybe it's okay and maybe it's not. We don't know how they will unravel.

"And the other thing many people think about is cyber-security—that's a growing problem, and we don't fully understand the vulnerabilities. But it doesn't mean it's a black swan. Risk is endogenous to the system!"

Jeremy Clift is Publisher of the IMF and a former Editor-in-Chief of Finance & Development.

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