

# A Day at the Fed

LECTURA #

**91**

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## WHAT DO WE DO AT THE NEW YORK FEDERAL RESERVE

It's 7 a.m. and guard Bill Joyner has just started his watch outside the garage of the Federal Reserve Bank of New York. His post is a few yards from the corner of Maiden Lane and William Street, where, three centuries ago, Dutch housewives washed family linens in a brook that tumbled through the area. The day's humidity is such that Joyner already has removed his blue uniform jacket, thus revealing his gold shield and the gold pin of an expert sharpshooter. Also exposed is the .38 caliber revolver that hangs in Joyner's left-side shoulder holster.

An armored truck inside the garage wants to exit. Joyner signals another guard to press the control that sends the steel curtain gate clanking upward, then guides the cumbersome vehicle out of the area. After it exits onto the narrow street, Joyner signals a delivery truck at the front of the line on Maiden Lane to enter. After he ushers it inside, the gate is closed. Outside, Maiden Lane is empty except for the line of vehicles waiting to load or unload their cargoes.

Most New Yorkers are just rubbing the sleep from their eyes, but a day at the Fed already has begun - especially for William J. McDonough, the Bank's president, who is reviewing notes prepared by his advisers. In a few hours, McDonough will attend a Thursday meeting of the Federal Open Market Committee (FOMC) - the Federal Reserve System's top monetary policy body - in Washington, D.C. The meeting, usually held on a Tuesday, was rescheduled because Alan Greenspan, the chairman of the FOMC and of the System's Board of Governors, was attending an international monetary conference.

The day also has begun for Ernie Patrikis, the New York Fed's first vice president, who left his Greenwich Village apartment a little while ago. With McDonough in Washington, Patrikis, who is second in command, will be in charge.

Barbara Tomsey is leaving her home, too, for a day not at the Fed but on behalf of the Fed. As a senior bank examiner, Tomsey has spent the past eight weeks examining the books and interviewing the U.S. management of a prominent U.K. bank. Although headquartered in London, the bank, with a number of offices in Manhattan, does considerable business in the geographic territory covered by the New York Fed. This territory, known as the Second Federal Reserve District, encompasses all of New York State, the 12 northern counties of New Jersey, and Fairfield County, Connecticut, as well as the Commonwealth of Puerto Rico and the U.S. Virgin Islands.

### The World of the New York Fed

The people working at the New York Fed are not confined to its block-square building in lower Manhattan or to its two other addresses in the financial district. Their work also extends to a branch in Buffalo, to its East Rutherford Operations

Center (EROC) in New Jersey, and to its Utica office, a regional check processing center in upstate New York.

In no place, however, does the work revolve around individual savings and checking accounts or consumer or business loans - the services normally associated with banks. Rather, as one of 12 regional banks supervised by the Board of Governors of the Federal Reserve System in Washington, D.C., the New York Fed performs central banking functions. That is, it acts as a bank for banks while also supervising and examining them.

The Buffalo Branch, one of 25 Federal Reserve Branches located around the country, operates much like its New York headquarters, but on a smaller scale. It is led by Carl Turnipseed, a senior vice president, who oversees a staff of about 230. The Buffalo Branch provides fiscal services for the U.S. Treasury and serves the First and Second Federal Reserve Districts as one of five processing sites in the country for savings-bond<sup>1</sup> transactions. The Buffalo Branch also processes food coupons - the volume of which makes it the country's largest food-stamp operation - and dispenses coin and currency<sup>2</sup> to 34 counties in upstate New York.

### **Fostering a Safe and Flexible System**

Congress created the Federal Reserve System in 1913 and delegated to the new central bank its Constitutional prerogative over money and the regulation of money's value. Congress also required all commercial banks chartered<sup>3</sup> by the Federal Government - called national banks - to become members of the Federal Reserve System. (For state chartered banks, membership remains an option.) The Fed's objective since then has been to provide the United States with safe and flexible banking

formulating and implementing monetary policy in order to balance the flow of money and credit<sup>4</sup> against the demand for goods and services. The goal is to foster a sustainable rate of economic growth and stable prices by influencing money and credit conditions in the economy;

maintaining a stable financial environment and containing systemic risk<sup>5</sup> that may arise in the financial markets and the banking and payments systems;

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<sup>1</sup> Saving-bond: unos bonos emitidos por el gobierno americano en denominaciones muy pequeñas (\$50) para que los compren los individuos.

<sup>2</sup> **Currency:** billetes, papel-moneda

<sup>3</sup> Chartered: que tienen un *charter*, una autorización para operar.

<sup>4</sup> Crédito: la cantidad de préstamos que se otorgan en un país.

<sup>5</sup> Riesgo sistemático: el riesgo de que muchos bancos quiebren por un pánico entre el público que retira de golpe su dinero porque piensan que el banco no está seguro.

regulating and supervising banking institutions to assure that the banking system is sound, competitive, and responsive to the public's needs;

administering federal laws for consumer credit protection and community reinvestment that apply to banks;

facilitating the transfer of funds among depository institutions and their customers, as well as maintaining an adequate flow of currency - coin and paper - to meet the demands of the public; and

serving as the Federal Government's fiscal agent by issuing, redeeming, and paying interest on U.S. Government securities, handling the government's checking accounts and the financial activities of various federal agencies, and trading foreign exchange for the Federal Reserve System and the Treasury. The Federal Reserve also assists foreign monetary authorities in their U.S. financial transactions by receiving their dollar deposits, holding gold reserves, and investing in Treasury securities.

### **A Worthy Place**

In New York, around the Fed's marquee-sheltered employee entrance on Maiden Lane, activity picks up between 8 a.m. and 9 a.m. More than 2,500 workers greet one another as they arrive for the day shift, some crossing paths with the main office's 112 night-shift workers who have begun taking their leave.

The 14-story building - massive and ornamented - seems out of place amid the soaring skyscrapers that surround it. To some, the New York Fed appears to be a fortress, its moat formed by Maiden Lane and Nassau, William, and Liberty Streets. But it also bears features worthy of the palace of a Renaissance king. Indeed, its architect, Phillip Sawyer, studied in Italy, where he found inspiration in Florence's Strozzi, Pitti, and Riccardi palaces.

In emulating Renaissance elegance, Sawyer strove for more than just eye appeal. The massive blocks of sandstone and gray-and-blue limestone that define the structure impress viewers with a sense of soundness, durability, and authority. Reinforcing this image, while hinting at the guarded treasure within, are stout iron bars on the building's lower windows. On Liberty Street, huge wrought-iron lanterns - hand-crafted by artisan Samuel Yellin - flank the nearly 30-foot-high entrance. The lanterns, considered among the finest examples of ironwork in the United States, are similar to those at the Strozzi palace. Ornate but functional grills and gates in floral, animal, and geometric designs grace the public lobby, where vaulted ceilings peak 30 feet above the travertine floors in cathedral-like grandeur. Such features have brought architectural landmark status to the building, despite its relatively brief, three-quarters-of-a-century history.

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## THE FED AS A BANK FOR BANKS

### Metal, Mail, and Melons

An entrance along Maiden Lane provides access to the building's garage and loading platform. Inside the garage, abutting the loading platform, a large van is unloading potatoes, onions, melons, celery, and lettuce destined for the kitchen. Produce, like all other supplies received by the Bank, must be delivered through the garage. In another area, a post-office truck inches into a parking slot. It's there to deliver several hundred pounds of mail to the Bank's 56-worker post office, which has its own zip code and operates under contract with the U.S. Postal Service.

The area appears more harried than usual this morning, as several deliveries are delayed by a carefully orchestrated shipment of gold from the Fed's vault onto an armored truck and, with Joyner's assistance, into the street toward an undisclosed destination. Other armed guards observe the activity as well, some from closed-circuit monitors in the central-watch room about 300 feet away.

In fact, all high-security areas of the Bank are scanned and monitored around the clock by central-watch personnel. A suspicious development will mobilize guards immediately, and all Bank exits will be sealed within seconds. While practice alerts are held occasionally, an actual holdup has never been attempted.

### EROC's Automatic Cash Machine

Out at the East Rutherford Operations Center, some 13 miles from the Fed's main office, cash processing is at work with robotic handlers, advanced telecommunications, and an ultrasophisticated surveillance system. The future already has arrived at EROC.

The three-floor, 440,000-square-foot facility, opened in 1992, was designed to remove the cash-handling function from the Manhattan office and to integrate its three divisions - currency verification, paying and receiving, and operations support - into an automated process in East Rutherford, New Jersey. The result is an around-the-clock operation that each day handles almost \$1.5 billion in Federal Reserve notes, thousands of pounds of coin, and, like the Buffalo branch, millions of food coupons.

Just outside the building, in an expansive truck yard with electronically secured bays, armored carriers drop off or pick up currency. "The trucks don't have to line up on a busy New York City street anymore," says Julian Timmons, paying and receiving supervisor. "We have eight loading bays 20 feet away from our processing room, so we can service the armored carriers more quickly than we could at our main office in Manhattan."

But what truly sets EROC apart - indeed, the Fed's technological jewel - is its "people-less" vault. The 1-million-cubic-foot area that stores valuables stands three-stories high and has the capacity for 5,400 transports, or pallets, of currency. An impressive site, it houses four 52-foot-high storage-and-retrieval vehicles,

which look like cranes and, as they swoop around the vault depositing and withdrawing currency pallets, travel up to 600 feet a minute.

Two control rooms - one for each operating floor - serve as vault custodians and monitor the industrial robots and other activity in the automated vault. Across from each control room, five of these robots, called automated guided vehicles (AGVs), roam in view of strategically located paying and receiving supervisors, who are themselves under the constant eye of some 240 surveillance cameras in the area. Not surprisingly, more than a few of the cameras scan the vault itself.

### **Coins by the Ton**

Work has been underway since 7:30 a.m. in the first-floor coin section, where Vladimir Zitnan, flanked by 250 bags of dimes, lifts bag after bag. Although this is the only manual operation left in Cash (the minimal resources devoted to coin verification don't warrant further automation), physical handling is minimized even here. Instead of their contents' being counted, the bags are weighed. Each bag contains \$1,000 of dimes and weighs 50 pounds, four ounces. At least it's supposed to.

Just minutes into his shift, Zitnan signals a supervisor that a bag weighs less than it should. This, in turn, prompts the supervisor to contact the depositing institution to inform it that the bag is being returned. Identifying the bank is simple, as the bag was tagged with the name of its shipper.

The coins from other bags are then stored for distribution, where they sit as inventory with new coins from the Philadelphia Mint. The new coins eventually get put into circulation to meet the new demand and to replace coins that are worn, lost, or hoarded.

### **Notes by the Bundle**

Across from the coin vault on the first floor are ten paying-and-receiving rooms, where teams of tellers put the Cash Processing Management System (CPMS) to use in tracking the movement, disposition, and value of currency. AGVs also are put to use to pick up currency to be stored in the vault or to deliver cash to be paid out, on a "just-in-time" basis.

Unprocessed currency is moved by AGVs from the first floor into the vault. When summoned, any of the three AGVs on the second floor delivers this currency to one of 15 currency-verification rooms - in full view, of course, of the second-floor control room. This area is where employees working one of the two shifts carry out the main responsibility of processing incoming deposits from the Bank's customers - to the tune of 12 million notes a day.

Robert Hunter loads a stack of 1,000 twenty-dollar bills onto a feeder at one side of the BPS 3000 - a high-speed, second-generation currency processor that can handle up to 90,000 notes an hour. Sensors inside each processor check the fitness,

authenticity, and denomination of every note passing through it. Depending on sensor findings, the notes are transported to a "fit," "reject," or "shredder" module.

Fit notes are strapped into 100-note packages, whereas notes that are worn, torn, or soiled are shredded on-line and vacuumed down to a briquetter, located on the first floor, to be compressed into a 2.2 pound briquette. Currency briquettes are a byproduct of the 1.4 billion notes (with a former value of \$40 billion) that the New York Fed destroys every year. Notes that are rejected are of a different denomination from the ones being processed or have characteristics the BPS 3000 fails to recognize. They wind up being directed to a member of the currency-verification team for further examination.

On average, 140 suspected counterfeit notes are found out of the 12 million notes processed daily by the New York Fed. Each one is stamped "counterfeit" and forwarded to the U.S. Secret Service, the section of the U.S. Treasury responsible for protecting against this form of fraud.

The fit notes are grouped into packages of 100 notes apiece and placed into plastic bags. Once a bag is filled with ten packages, it is sealed, then returned to the vault for storage. The bag eventually will be withdrawn by a depository institution, and its contents will be put back into public circulation.

The currency injected into circulation also will include crisp new Federal Reserve notes, which arrive in "bricks" of 4,000 notes. New notes are produced in Washington by the U.S. Bureau of Engraving and Printing (another division of the U.S. Treasury) and turned over to the Federal Reserve Banks in exchange for pledges<sup>6</sup> of Federal Reserve assets. The bulk of this collateral is in the form of U.S. Government securities owned by the Federal Reserve System, although gold certificates, *special drawing rights*<sup>7</sup>, and such "eligible" paper as bills of exchange or promissory notes can be pledged as well.

Activity in the Paying and Receiving section generally lags commerce. Monday usually is a slow day, as merchants have yet to deposit their weekend proceeds at their banks. The volume of currency processed at EROC then tends to build, reaching its peak around midweek before tapering off again.

There are seasonal variations as well. Shopping for holidays around year-end increases consumer currency needs, and a rising volume of money leaves the vault in November and December to enter public hands. In January, EROC's receipts rebound as store owners deposit holiday-shopping revenues. Shopping demands around Easter increase currency needs again, as do resort owners preparing for summer and vacationers preparing for travel. withdrawals from the Fed's vault

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<sup>6</sup> **Pledge:** un compromiso de pago o pagaré que la Reserva Federal firma. Estos pagarés o promesas de pago están garantizados por algunos activos del Fed.

<sup>7</sup> **Special Drawing Rights:** unos certificados que pueden ser usados para hacer pagos internacionales.

continue throughout the summer until Labor Day, when the trend reverses itself and deposits accelerate until the year-end cycle resumes.

### Checks by the Millions

Every working day, more than 400 employees at the New York Fed's EROC and the Utica office are engaged in processing their own flood of paper - about 6 million checks, weighing ten tons and representing some \$10 billion. These checks come from commercial banks or thrifts, and they're called a variety of names, including *share drafts* and *negotiable orders of withdrawal*<sup>8</sup>. But to sorter/operator Bob Owens and his Utica office coworkers, if it moves money, it's still a check.

The tens of thousands of pieces of paper that get fed into Owens' electronic sorting machine are imprinted with a special machine-readable code. Called Magnetic Ink Character Recognition (MICR) symbols, these are the hieroglyphs on the lower left of virtually every check. They are read by the machine's electronic scanners and translated into sorting instructions.

Scanning 1,800 checks per minute, Owens' machine "fine sorts" checks by routing them into individual pockets according to the institutions on which they are drawn. A continuous tally of the individual and total amounts to be credited or debited to each institution is recorded and printed. The computer also will instruct the New York Fed's accounting department to make the appropriate adjustments to the institutions' reserve accounts.

Reconciliation clerks carefully check a compilation of these data to ensure that they match the "cash letter" - a deposit voucher that accompanies each package of checks. After processing, most checks are bundled and dispatched, along with copies of the Fed's tally, to the institutions on which they were drawn<sup>9</sup>.

### The Electronic Bookkeeper

The first prerequisite of "checkbook" money is to be widely acceptable. This wouldn't happen without the existence of "clearing" mechanisms to transfer money balances among banks and thrifts<sup>10</sup>. Banks by themselves and in association with others, acting together as a "clearing house," handle about three-quarters of all checks written in the United States. The remainder is processed by the Federal Reserve System, of which 10 percent is handled by New York Fed employees like Bob Owens.

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<sup>8</sup> **share drafts, negotiable orders of withdrawal:** un nombre que se le daba antes a los cheques que emitían las cooperativas o los bancos de ahorro.

<sup>9</sup> **Drawn:** girado: que se ordena su pago a ese banco o institución.

<sup>10</sup> **Thrifts:** bancos de ahorro, que se especializan en aceptar cuentas de ahorro.



Every check is an order instructing a depository institution<sup>11</sup> to pay someone a specified amount of money. Most money transfers shift deposits from the account of a customer at one bank to an account of a customer at another bank. This is done by changing entries on the books of the two institutions through a clearing house or the Fed, rather than by a physical transfer of cash, which is risky, costly, and inefficient.

When processing a check that a bank or a thrift in the Second District has received from a customer, the Fed credits<sup>12</sup> the value of the check to that depository institution's reserve account at the Fed. An equivalent amount is then deducted from the reserve account of the Second District bank on which the check was drawn.<sup>13</sup>

Transactions involving banks in other regions of the country are almost as simple. When a customer deposits a check drawn on a California bank into an account at a bank in Syracuse, New York, the check gets sent to the New York Fed's regional check processing center in Utica. The Utica office then credits the reserve account of the Syracuse bank and forwards the check to the Federal Reserve Bank of San Francisco, which deducts the same amount from the California bank's reserve account.

### Floating in a Paper Sea

The banks receive same-day credit for most of the checks they deposit at the Fed for processing and wait only one or two business days for credit on the rest. It can, however, take the Fed longer to debit the accounts of depository institutions on which the checks were drawn. When this happens, the funds briefly may be credited in two accounts at the same time, creating "float,"<sup>14</sup> or additional reserves, in the banking system.

The amount of float can be considerable and rise unexpectedly. Sometimes a large influx of checks creates logjams of unprocessed paperwork, or bad weather slows transportation and delays presentation of checks for payment.

Work jams and weather can create more than check-processing problems - they can complicate the execution of monetary policy. Each day, the Federal Reserve must account for float when determining the size of its "open market operations", which add reserves to or drain reserves from the banking system.

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<sup>11</sup> **Depository institution:** institución que acepta depósitos de dinero: un banco o una cooperativa.

<sup>12</sup> **Credit:** acreditar, poner dinero en la cuenta de uno

<sup>13</sup> Todos los bancos tienen cuentas de cheque abiertas en el Fed. Cuando un banco A manda a cobrar un cheque girado contra un banco B, el Fed saca el dinero de la cuenta de B y lo deposita en la de A.

<sup>14</sup> **Float:** dinero adicional que hay en los bancos del país porque el Fed le ha dado dinero a unos bancos (que depositaron cheques en el Fed) antes de quitárselo a los otros bancos contra los que se giraron esos cheques.

During the 1980s, the Federal Reserve instituted a number of changes to control and minimize float. As a result, a banking-system average of nearly \$7 billion a day in the late 1970s was cut to \$340 million in the mid-1990s. This was made possible through procedural modifications, such as changing deposit deadlines, and by improvements in transportation and processing equipment.

Despite these improvements, the capacity of paper-processing technologies is limited. This is most apparent during the researching of errors, always an expensive part of any check-processing operation. Even today, the Bank's high-speed processing equipment rejects about one of every 100 checks. The two reasons are machine error (e.g., a check gets caught in the sorter), which accounts for about 25 percent of the rejections, and bank error (e.g., a misencoding of MICR information), which accounts for the remaining 75 percent.

The manual handling of these rejections is so costly and time-consuming that imaging technology, which captures the front and back of a check and turns them into a computer record, has long been considered a promising alternative. It's also a reality, one currently being adopted throughout the System after a successful test in 1996 by the New York Fed.

Compared with manual handling, imaging technology requires very little time to resolve check-processing complications. What's more, since the check is captured electronically, the individual researching the source of the complication needn't touch or be near the paper check itself. Still, for all of its efficiencies, even imaging technology may be rendered obsolete - and by something as simple as ordinary telephone lines connected to automated clearing houses (ACHs).

### **ACHing for a Paperless Society**

In ACH transactions, consumers don't issue paper checks at all, but, rather, they, make payments electronically. Using telephones, personal-computer interfaces, or written authorizations, ACH consumers instruct their banks to debit [sacar dinero] their accounts and to issue credits [entrar dinero] to the accounts of their creditors.

Many individuals already receive such government payments as Social Security benefits and such commercial payments as salaries through this automated mechanism, which is popularly known as "direct deposit." Individuals also can authorize the withdrawal of funds electronically from their accounts to pay recurring bills like mortgages and insurance premiums, thereby reducing the need to write checks or deliver cash each month.

Companies have similar privileges: Funds from regional accounts can now be electronically consolidated into a single account, and vendors can be paid automatically by the debiting of corporate accounts set up for that purpose.

By automating payments and settlements in this way, ACHs offer a high-volume, lower-cost alternative to processing a paper check and transporting either it or its image back to the depository institution on which it was drawn. Small wonder,

then, the use of ACHs has exploded. More than 3 billion payments valued at nearly \$10 trillion were made through ACHs nationwide in 1996, compared with 750 million payments valued at \$2.2 trillion in 1986. Of all these payments, the Fed processes about 75 percent.

Despite this growth, the ACH method has yet to undermine America's fondness for checks. Households and businesses issued some 65 billion of them in 1996, compared with 47.5 billion in 1986. And though the Fed's share of U.S. check processing has declined in recent years, it still handles about a quarter of the domestic volume. Thus, in terms of replacing checkbook dollars with electronic dollars —computer bookkeeping entries— and for transferring checking account balances without paperwork, the U.S. payments system still has a way to go. Meanwhile, for people like sorter/operator Owens, the now of paper checks continues unabated.

### The Federal Checkbook

In addition to processing the public's checks, the New York Fed processes roughly 10 million U.S. Government checks collected by banks located in the First and Second Reserve Districts. Among the checks drawn on the Treasury's account at the Fed are federal pensions and veterans' benefits, tax refunds, and millions of payments for government-bought goods ranging from milk to missiles. An increasing share of these payments is being made electronically.

Government checks are processed at EROC in a manner similar to the Fed's processing of individual and corporate checks. The dollar amounts of the checks are credited to the depositing banks' reserve accounts. However, instead of deducting these amounts from the accounts of other banks, the Fed deducts funds from the account it maintains for the Treasury. Also, the Fed uses state-of-the-art digitized image technology to convert the paper check to an electronic payment. The payment information is transmitted to the Treasury's computer system to update its accounts, and the images are readily available to resolve any payment errors and disputes. The actual checks go to a government warehouse for storage.

Handling the government's checking account is not the only operation the Fed performs for the Treasury. It also issues, exchanges, and redeems Treasury IOUs<sup>15</sup> - bills, notes, and bonds - and arranges the interest payments these obligations receive. In addition, EROC and the Buffalo Branch of the New York Fed process more than 400 million government food coupons a year.

### Wire Money

By late morning, the New York Fed's electronic payments system for large dollar transactions already has moved billions of dollars and securities between banks in New York City and other parts of the United States. The money is sent over the

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<sup>15</sup> **IOU:** *I owe you*, una promesa de pago o pagaré. Los *Treasury Bills* son promesas de pago del Gobierno.

Federal Reserve's electronic payments network, known as **Fedwire**. The volume of money and securities processed through Fedwire is staggering —\$1.7 trillion on an average day— two-thirds of which involves banks in the Second Federal Reserve District.

Of course, there is no physical exchange of funds over Fedwire. Messages are sent by electronic impulses through a network of computers and terminals that link all Reserve Banks and their Branches with local depository institutions. Nationwide, about 12,000 financial institutions have access to the Fedwire network. Two-thirds of them —the ones that do the bulk of the 75-million-plus Fedwire transfers every year— have direct computer or terminal links; one-third, mainly smaller institutions, process requests by telephone through the Federal Reserve Bank in their District.

In a typical transaction, the New York Fed is instructed, via a computer message from a commercial bank in New York, to transfer \$5 million to a bank in, say, St. Louis. The New York Fed reduces the reserve account of the New York commercial bank by \$5 million and sends a message over Fedwire to the St. Louis Fed. The St. Louis Fed will add \$5 million to the reserve account of the St. Louis commercial bank and then notify that bank that it has been credited with the funds. Under Fedwire rules, the St. Louis commercial bank must credit its customer on the same day. Further, since all transactions are final upon notification, which takes just seconds, the customer receives and has use of the funds that day.

The Fedwire system also handles government securities transactions among banks that maintain their securities deposits in book-entry form<sup>16</sup>. Ownership is easily transferred among banks by changing title through these computer records. Around \$700 billion of these transfers take place on an average day, with about three-quarters of them originating with the New York Fed. For the entire System, government-securities transactions account for 40 percent of the total dollar value handled over Fedwire.

Banks also can transfer funds over a private-sector electronic system known as CHIPS, the Clearing House Interbank Payments System, run by the New York Clearing House<sup>17</sup> Association. Unlike Fedwire, CHIPS mainly handles international payments and links about 100 depository institutions, most of which are foreign banks, with offices or subsidiaries in New York City. The \$1.3 trillion in payments that CHIPS processes daily is not final until settlement of net debit and net credit balances is made at the close of each business day by the New York Fed over Fedwire.

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<sup>16</sup> **Book-entry form:** unos valores —bonos, por ejemplo— que nunca se imprimen en papel. El que los emite —el gobierno o la empresa— anotan un libro —una computadora— quién los compró. A esa persona es a la que va a pagarle los intereses y, al final de la vida del bono, devolverle el principal.

<sup>17</sup> **Clearing House:** cámara de compensación bancaria: una reunión de representantes de varios bancos para intercambiarse los cheques que tienen cada uno del otro y pagar en efectivo la diferencia

All Fedwire electronic transactions are executed in seconds. From time to time, as with any system that is heavily reliant on machinery, there are operating or computer problems. These difficulties, combined with volume peaks that often occur at the end of the processing day, occasionally keep Fedwire open after its closing time. The Fed also maintains a complete backup system at EROC, which includes space that's already set up and outfitted for the relocation of main-office staff in the event of a power outage.

But while the Fed moves money - by electronic transfers, check processing, and cash disbursement - that is only part of its job. Another is managing the growth in the nation's money supply<sup>18</sup>.

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## THE FED AS THE MONETARY POLICY MAKER

### Planning for FOMC

Before each Federal Open Market Committee (FOMC)<sup>19</sup> meeting, the Bank's president, Bill McDonough, meets with members of the Bank's research department and with officers from other areas of the Bank, including domestic, and international operations, to discuss monetary, financial, and economic developments. The research staff has been monitoring regional, domestic, and international trends, analyzing their significance, and projecting their course.

The regional information, as well as some of an anecdotal nature, gets compiled by the Reserve Bank's staff into what's known as the Beige Book commentaries on economic subjects of relevance to the District. McDonough also studies two Board-prepared publications: the Green Book, which contains forecasts of the economy and the assumptions behind them; and the Blue Book, which presents various monetary policy options, each of which is associated with a different level of the federal funds rate - the interest rate commercial banks charge one another for the overnight borrowing of reserves they hold on deposit at the Fed.

### Members, Be Seated

In Washington, McDonough arrives at the FOMC meeting at the Board of Governors (BOG) a few minutes before chairman Greenspan opens the session. By then, the 12 voting members of the FOMC, seven non-voting presidents, and assorted members of the BOG staff have taken their seats around an oval, 30-foot-long, Honduran mahogany table. The voting members are the seven governors of the Federal Reserve Board, McDonough, who is a permanent voting member and the FOMC vice chairman, and four other Federal Reserve Bank presidents, who serve on a one-year rotating basis. The special status of the New York Fed President acknowledges New York City's position as the national's financial capital and the New York Fed's role in implementing monetary policy.

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<sup>18</sup> **Money supply:** oferta monetaria: la cantidad de dinero que existe en un país en manos del público

<sup>19</sup> **FOMC:** Es el comité más importante de la Reserva Federal, porque es el que determina cuánto dinero se va a dejar circulando en las manos del público, que es una variable económica vital para la economía de un país.

The meeting begins with the approval, usually pro forma, of the policy record of the previous meeting.

Next up is Peter Ryerson Fisher, who as the executive vice president of the New York Fed's Markets Group oversees Foreign Exchange Operations<sup>20</sup> and Domestic Open Market Operations. Fisher's report on the foreign exchange markets is up-to-the minute fresh, thanks to a call to the New York Fed's foreign exchange trading floor just before the FOMC meeting began. After discussing his view of the potential for U.S. monetary authorities to engage in intervention activity in the foreign exchange market<sup>21</sup>, Fisher moves on to address the domestic operations, also under his purview.

Domestic open market operations are the purchase and sale of U.S. Government securities by the New York Fed's Domestic Open Market Desk to meet the goal for reserve availability set by the FOMC. Fisher introduces this subject with a review of activity in the domestic financial markets, then answers questions about the open market operations undertaken by the New York Fed since the last meeting.

The Committee ratifies the Markets Group's transactions in both foreign exchange and the open market, after which it's given a report by the Division of Research and Statistics at the Board on current economic developments. The report, presented by a senior member of the division, is a standard feature at FOMC meetings. Twice each year, however, it is expanded to include detailed economic projections for the next couple of years, as well as forecasts of the money supply, credit markets, and interest rates

Following the report, everyone around the table expresses his or her views on the economy. Each Reserve Bank president, in addition to considering national economic developments, discusses conditions specific to his or her District. McDonough takes this opportunity to say that, given current conditions, he is wary of the pace of reserve expansion and monetary easing<sup>22</sup>. Too much expansion, he says, could raise inflationary expectations and put upward pressure on long term interest rates<sup>23</sup>.

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<sup>20</sup> **Foreign Exchange Operations:** el Fed de Nueva York todos los días compra moneda extranjera (foreign exchange) a los bancos de Nueva York y a los otros bancos centrales de los gobiernos de otros países.

<sup>21</sup> **Intervention activity in the foreign exchange market:** si las autoridades monetarias americanas (el Fed) debe comprar o no monedas extranjeras en el mercado de divisas, para mantener el valor del dólar americano.

<sup>22</sup> **Reserve expansion and monetary easing:** se está permitiendo que aumente la cantidad de reservas de los bancos y, por lo tanto, de dinero en manos del público.

<sup>23</sup> Normalmente, si se piensa que la inflación —los precios— van a subir, entonces los bancos y los que venden bonos, subirán las tasas de interés. Hacen esto porque una inflación del 4% anual se “come” el 4% del valor del dinero, y hace que unos intereses del 10% sean realmente de un:  $10\% - 4\% = 6\%$

Other Committee members register their views as well, most agreeing but a few differing. The free-flowing discussion ends with a polling of voting members for a preliminary indication of the approach<sup>24</sup> they favor to achieve monetary objectives.

### Formulating the Policy Directive

Now it's time to set the specific policy directive for the current period. The Committee members already have reviewed their Blue Books, the Board-prepared documents that set forth scenarios for varying degrees of reserve restraint<sup>25</sup>. Each scenario is associated with a different level of the federal funds rate. A lower funds rate constitutes a reduced level of reserve restraint and an easier monetary policy, while a higher funds rate constitutes a greater level of reserve restraint and a tightening of monetary policy<sup>26</sup>.

As the interest-rate behavior under each scenario is discussed, a senior member of the Division of Monetary Affairs at the Board comments on the alternatives and highlights areas warranting special attention. Chairman Greenspan then weighs in with what he believes to be the appropriate policy stance. Committee members respond, either by agreeing with the Chairman's views or by lobbying for another of the policy scenarios. After a spirited discussion, the Chairman formulates a tentative proposal, which he feels represents the views of most Committee members.

As the FOMC readies itself for a vote on this proposal and the attendant federal funds rate, it knows the outcome will guide the Domestic Open Market Desk<sup>27</sup> at the New York Fed in the buying and selling of government securities. The Desk's charge, simply put, will be to achieve a faster, slower, or steady expansion of bank reserves - in accordance with the FOMC directive<sup>28</sup>.

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<sup>24</sup> *approach*: en definitiva, si quieren hacer que suban o que bajen las tasas de interés. Particularmente se fijan en el *fed fund rate*: la tasa de interés que se cobran los bancos por préstamos que se hacen entre sí, normalmente de un día de duración, para cubrir sus requisitos de reserva que les impone la ley.

<sup>25</sup> **Reserve restraint**: cuánto dinero se va a permitir que esté fluyendo por el país.

<sup>26</sup> **Tightening of monetary policy**: Si la Reserva Federal consigue que los bancos suban el *fed fund rate*, entonces menos bancos van a pedir prestado —por que les sale más caro— y, por lo tanto, van a prestar menos al público. Esto hace que haya menos dinero en circulación en el país. La gente tendrá menos dinero disponible para hacer compras. De esta forma se espera combatir la inflación, la subida de precios. A esta reducción del dinero se le llama “estrechamiento” (*tightening*) de la política monetaria.

<sup>27</sup> **Domestic Open Market Desk**: es una oficina que hay en el Fed de Nueva York que se encarga de comprar y vender Bonos del Tesoro todos los días en el “mercado abierto”. Se le llama “abierto”, pero realmente es una lista cerrada de unos 40 dealers de bonos —casas de corretaje o bancos— que están autorizados por el Fed para comprar y vender bonos a la Reserva Federal. Se les llama *primary dealers*.

<sup>28</sup> ¿Cómo logra el Fed aumentar el dinero que hay en manos del público a base de comprar bonos a estos *primary dealers*? Si el Fed compra este mes muchos bonos a los bancos, lo que está haciendo es cambiarle a los bancos sus bonos por cash. Los bonos no sirven a los bancos para hacer préstamos, el cash sí. Por lo tanto los bancos podrán ahora conceder más préstamos a otros bancos. Cómo hay más bancos ofreciendo dinero, esto hará que el precio de este dinero —el federal fund

The Committee also knows that it need not be in unanimous agreement. In fact, were any of the FOMC's 12 voting members to cast a "nay" vote, the dissent and the reasons for it would be discussed in the policy record of the meeting, along with a breakdown of the votes.

The public is informed of these deliberations in three ways: a change in monetary policy is announced on the day the FOMC votes (no change is indicated by the Fed's saying there'll be no announcement); the policy record, also called the summary, is released shortly after the next FOMC meeting; and a complete transcript of the session is made available about five years later.

The rules and rhythms of Fed disclosure have evolved over the years in an effort to balance the spirit of democratic government with the desire to keep public interpretation of policy moves from hindering the orderly functioning of financial markets<sup>29</sup> and the implementation of monetary policy directives. Thus, while ensuring against leaks to the possible advantage of certain traders, the timing of the disclosure of FOMC decisions is arranged to minimize roiling the financial markets and to allow full and frank policy deliberations at Committee meetings.

On this particular Thursday, the directive passes unanimously. And though the vote officially ends the FOMC meeting, the duties of its participants are far from over.

As Fisher calls New York and confers with the officers at the Domestic Open Market Desk, McDonough meets with two other Reserve Bank presidents to discuss other Federal Reserve business before returning to New York, where, at 4:30 p.m., he is scheduled to conduct a telephone conference of the New York Fed's board. Meanwhile, members of Federal Reserve Board staff are left to translate the monetary policy directive into specific quantitative objectives for reserve availability. These will guide the actions of the Domestic Open Market Desk until the next FOMC meeting in six to eight weeks.

During this inter-meeting period, at least one of the voting Reserve Bank presidents will participate in daily conference calls with Fisher. One or more of the governors in Washington and McDonough in New York may participate as well. A special meeting of the full Committee might even be convened by telephone should developments unfold in an unanticipated manner.

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rate—baje: que los bancos estén dispuestos a cobrar menos intereses para poder conseguir que alguien le coja el dinero prestado. De esta forma, con la compra de bonos, el Fed logra que baje el fed fund rate, a pesar de que es una tasa que la pone cada banco libremente, y no es el Fed el que directamente la establece.

<sup>29</sup> Se piensa —al menos así piensa el Fed— que, si se anuncian los detalles de lo que el Fed hará, entonces los inversionistas tratarán de anticiparse a lo que el Fed piensa hacer, comprando o vendiendo bonos y acciones. Esto hará que se produzcan grandes subidas y bajadas de precios en las bolsas o mercados financieros. Para evitar esto el Fed mantiene en secreto lo que se comenta en estas reuniones.



## Managing the System Portfolio: the Open Market Operations

Even as the Committee meets in Washington to determine future monetary policy, the officers and staff at the Domestic Open Market Desk confer at the New York Fed. They must decide on the day's course of action, one that will be in keeping with the FOMC's existing directive for the degree of reserve restraint and the level of the federal funds rate.

By law, banks and thrifts<sup>30</sup> have to maintain an average level of reserves over a two-week period based on requirements set by the Fed<sup>31</sup>. These reserves can be held as vault cash and as deposits at the Fed.

Although reserve requirements are the principal determinants of demand for reserves<sup>32</sup> over two-week intervals, other factors, such as uncertainty about inflows and outflows through bank deposit accounts at the Fed, also affect day-to-day demand. If reserve supplies are not sufficient to allow all banks to meet their legal requirements and other demands they may have, the federal funds rate will rise; if reserves are too plentiful, the funds rate will decline.

Open market operations<sup>33</sup> are the means by which the Fed keeps reserve supplies in balance with reserve demands<sup>34</sup>.

For example, if the FOMC sought an expansion of credit<sup>35</sup>, it would pursue a lower level of the federal funds rate, which would prompt other short-term interest rates to drop<sup>36</sup>, thereby inducing businesses and consumers to borrow more. This activity, in turn, would increase the transactions deposits held at commercial banks and, in so doing, raise the level of reserves that these banks must maintain. The Fed would accommodate the banks in this instance - after all, it set the credit expansion in motion - by having the Domestic Open Market Desk inject more reserves into the banking system.

Even when policy is steady, however, there may still be a need for open market operations. Various factors completely unrelated to activities by the Fed add and

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<sup>30</sup> **Thrifts:** bancos de ahorro, que se especializan en hipotecas residenciales y en depósitos de ahorro.

<sup>31</sup> Por ejemplo, un banco tiene que mantener en reserva (en cash o en cuentas en el Fed) un 12% del dinero que recibe en depósitos.

<sup>32</sup> **Demand for reserves:** los bancos que necesitan cash para cumplir con su nivel de reservas, lo que hacen es "comprar" dinero (tomar prestado) a otros bancos. A mercado donde los bancos se ponen en contacto para prestarse se le llama el "federal fund market" y al precio al que se compran, el "federal fund rate". Si muchos bancos salen a comprar dinero, el precio de estos fondos ("el federal fund rate) subirá

<sup>33</sup> **Open market operations:** la compra y venta de bonos que el Fed hace a los bancos

<sup>34</sup> **Reserve demands:** la demanda de fondos que hacen los bancos para cubrir su nivel de reservas (cash) que le impone la ley.

<sup>35</sup> **Expansion of credit:** que haya más préstamos disponibles para el público: individuos y empresas.

<sup>36</sup> Si a los bancos les cuesta más barato los *federal funds*, entonces ellos pueden prestar más barato al público, lo que hará que la gente coja más prestado.

drain reserves from the banking system each day. An increase in tax collections by the U.S. Treasury, for instance, drains reserves, which have to be replaced through open market operations just to keep total reserve supplies and the funds rate steady. Conversely, currency deposited by the public after holidays creates additional reserves, which must be reduced through open market operations if an oversupply of reserves is to be prevented.

### Morning at the Desk

Shortly before 10:00 a.m., a member of the Markets Group staff updates the estimates of reserve availability for the current and future reserve maintenance periods. Others on the Domestic Open Market Desk review the assumptions behind the estimates, noting any peculiarities that might affect the projections.

Collectively, they decide that estimated reserve needs can be met through \$4 billion in repurchase agreements (RPs)<sup>37</sup>. Such agreements add reserves to the banking system only temporarily because the dealers, when agreeing to sell securities to the Domestic Open Market Desk, simultaneously agree to buy the same securities back after a specified number of days and at a specified price. Thus, when the RPs come due, or "mature," the reserves generated by the Desk's purchase of these securities automatically are drained from the banking system.

The \$4 billion in repurchase agreements currently being sought by the Desk is an average-size transaction—one designed not to increase bank credit or lending so much as it is to counteract an expected decline in reserves arising from a seasonal currency outflow at banks and thrifts. If not offset, the expected decline in reserves would place upward pressure on the federal funds rate.

The staff observes that the markets for RPs and federal funds transactions are operating routinely. A group of 39 "primary dealers"—government securities dealers that have established trading relationships with the Federal Reserve—provides the Desk with information on the market for repurchase agreements, while reserve managers at various banks, brokers, and broker-dealer firms active in money markets offer information on the interbank market for federal funds.

A Desk officer reviews the plan with senior staff at the BOG (Board of Governors) in Washington during the daily 10:20 a.m. conference call. Had the FOMC not been in session, one of the Reserve Bank presidents with voting privileges would have participated in the call as well.

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<sup>37</sup> **Comprar RPs:** es como comprarle bonos a los bancos: esto les inyecta dinero. La diferencia es que un "Repo" o RP es una compra temporera: los bancos se comprometen a que, al cabo de una semana, tienen que "re-comprarle" (*repurchase*) esos bonos al Fed. Se trata entonces de una transacción temporera, para inyectar dinero durante una temporada: las compras de día de las Madres, etc.

Around 10:30 a.m., the trading desk staff initiates the RP transaction by soliciting bids<sup>38</sup> from the primary dealers. Lights flash on special terminals at the dealer firms as the Desk's announcement of the operation gets transmitted to their computers. In the next 15 minutes, the dealers respond with computer messages of their own, stating the rates and the amounts they are willing to transact on a temporary basis.

Today's offering elicits \$9 billion in propositions - more than enough to cover the intended \$4 billion operation. The Desk's staff, accustomed to receiving propositions several times the size of the solicited amount, quickly selects the best offers on the basis of highest yield.

A dealer whose offer is accepted must deliver the government securities, kept in book-entry form<sup>39</sup>, that it will later repurchase. Specifically, ownership of the dealer's securities is temporarily transferred to the account of the New York Fed, which credits<sup>40</sup> the reserve account of the dealer's bank at a Federal Reserve Bank. This transaction increases the amount of reserves not only for the dealer's bank but, because there's no offsetting transaction at any other depository institution, in the monetary system. The Fed is, in effect, paying for the securities by writing a check on itself. The bank then credits the dealer's deposit account for the securities transferred to the Fed, thus completing the operation in a manner of minutes.

### **Borrowing Reserves: the Discount Window**

"You have a one-day loan of \$10-million, due February 24."

These words conclude a telephone conversation that lasts less than five minutes, during which Valerie Rainford, a Credit and Risk Management officer at the New York Fed, has helped a commercial bank in the Second District offset a temporary reserve deficiency. In doing so, Rainford has used another of the Fed's tools to implement monetary policy - the discount window.

The discount window is the generic term applied to the Federal Reserve's temporary (adjustment, seasonal, or extended) loans to depository institutions. It is used by banks primarily to make orderly adjustments in reserve positions in response to unexpected, shortterm pressures for cash. These pressures can arise suddenly, as when a bank customer makes a large, unanticipated withdrawal or when it "draws down" heavily on a previously arranged loan.

*Adjustment* credit is used by depository institutions either to meet temporary requirements for funds or to cushion against persistent outflows of funds. *Seasonal*

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<sup>38</sup> **Bids:** que cada dealer le diga al Fed a cuánto le vende el RP. De esta lista de bids el Fed escogerá a los dealers que se los vendan más barato. Vender barato es lo mismo que decir que le pagan un interés más alto al Fed por el dinero que el Fed les "presta".

<sup>39</sup> **Book-entry form:** los bonos de Tesoro que tiene el dealer no tienen forma de papel, sino que son anotaciones en un libro que tiene el gobierno, donde dice que ese dealer es dueño de ese bono. El Fed de NY entra a ese libro y anota que ahora el nuevo dueño es el Fed.

<sup>40</sup> **Credits:** acreditar, dar dinero, poner dinero en la cuenta de alguien. En este caso, el Fed le da dinero al dealer.

borrowing privileges help small depository institutions<sup>41</sup> - mostly in rural, agricultural areas - cope with strong seasonal pressure on their reserve positions. *Extended* credit, meanwhile, is available to depository institutions for periods longer than those permitted under adjustment credit, usually to deal with exceptional circumstances.

Reserves often come under pressure during economic expansions<sup>42</sup>. Customers' loan demands are strong, yet the Domestic Open Market Desk, seeking to avoid inflation, may restrain the growth in bank reserves. Caught in this conflict, some depository institutions start turning down loan requests, selling assets, or even raising interest rates. Others, however, may temporarily borrow from the discount window to adjust their reserve positions.

While each Bank administers the Federal Reserve's guidelines as to how much and how often banks and thrifts may borrow, no depository institution can depend on discount-window credit for long. A critically undercapitalized bank, for example, is eligible for this type of credit only during the five day period that begins on recognition of its being capital deficient. The bank must then slow its lending, sell some investments, or acquire funds in the federal funds market, where banks with excess funds sell reserves to banks in need of short-term adjustments in their reserve positions. Otherwise, the bank can expect a call from Rainford or another officer in Credit and Risk Management to review its borrowing pattern.

As soon as Rainford hangs up the telephone for today's loan, she starts the process by recording the purpose of the loan, the name of the borrower, the size of the loan, and when it must be repaid. She also describes the collateral - those government securities or other assets pledged to back up the loan, which, more often than not, are drawn from the borrowing institution's inventory of securities already held at the Fed. Most loans of this type mature in one day but can sometimes be renewed.

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## THE FED IN THE FOREIGN EXCHANGE MARKET

### The Endless Market

On another floor, Dan Katzive, a trader/analyst on the foreign exchange staff, also is concerned about discount policy - but not the Fed's. Katzive has just heard a rumor that there will be a hike in Japan's discount rate. The rumor is just one of many picked up in daily conversation with other traders in the foreign exchange market.

This information will be passed to Zahra ElMekkawy, coordinator of the foreign exchange staff, as soon as Katzive concludes a telephone transaction with a commercial-bank trader.

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<sup>41</sup> **Depository institutions:** bancos y cooperativas de ahorro: instituciones que reciben depósitos.

<sup>42</sup> **Economic expansions:** épocas en que la economía (la producción, el empleo) están creciendo.

"At 1.6410 I buy one million pounds," Katzive says in the crisp style of the market. His purchase - one million pounds sterling<sup>43</sup> - is equal to more than \$1.6 million. The newly purchased sterling will be credited to a foreign central bank's account in London.

Trading in foreign exchange is only part of Katzive's job. Katzive, El-Mekkawy, and the halfdozen other traders/analysts also watch and analyze the reasons for changes in both the exchange rates and the cross rates (the value of sterling to marks, for example) of all major currencies.

To this end, Katzive, El-Mekkawy, and Dino Kos, the senior vice president of Foreign Exchange Operations in the Markets Group, compare notes on various reports from the market. Katzive points out that Japanese banks have been buying yen, supporting the reports that the Bank of Japan will hike its discount rate. "My sources in London say the Bundesbank may tighten as well - sooner than expected," Kos says.

A network of more than 45 direct telephone lines connects the console of the Fed's Foreign Exchange Trading Desk with trading desks at major banks in New York and other U.S. cities. There also are direct lines to the Federal Reserve Board and the Treasury, and special lines to central banks in Europe and Japan. The officers engaged in the foreign exchange function at the New York Fed can quickly get in touch with their counterparts at central banks around the world, ring them at work or, if necessary, at home. It may be 2 p.m. Thursday in New York, but it's 7 p.m. in London, 8 p.m. in Frankfurt, and 4 a.m. Friday in Tokyo.

The information gathered from the network of contacts is used by the Foreign Exchange Trading Desk to monitor market developments and to execute foreign exchange operations. It forms the basis for briefings to senior Fed officers as well as to the staffs of the Board and the Treasury.

Kos checks a computer screen for the most recent quotation for the mark. In the last hour, he has watched the German mark inch upward in value against the U.S. dollar. Meanwhile, the yen also has appreciated in value against the dollar.

### **A Key Currency**

A change in the value of a foreign currency in the exchange market will affect the international purchasing power of the dollar. For example, if the U.S. dollar declines in value against the German mark, it will take more dollars to acquire the same amount of marks or to purchase the same amount of German goods. The U.S. currency will have lost international purchasing power relative to the mark.

The dollar is still the most international of currencies, used not only by Americans dealing with foreigners but extensively by foreign traders and investors in transactions with one another. It also is used as a reserve asset by foreign central

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<sup>43</sup> **Pounds sterling:** libra esterlina, la moneda de Gran Bretaña.

banks, which accumulate dollar balances for a variety of purposes, including their intervention in the foreign exchange markets.

Efforts to maintain orderly markets can sometimes be complicated by such exchange-market player as commercial-bank traders, corporate treasurers, and participants in the futures markets for foreign exchange. These players collectively handle billions of dollars and, for this reason, respond instantly to international developments. An unexpected news item, a rumor, or an otherwise unexplained movement in interest rates may provoke a swift reaction, with traders trying either to protect their position or to make a speculative profit.

Beginning in 1973, the dollar was permitted to float freely against most other major currencies. The result is that, without market intervention by the Fed and the Treasury, the exchange value of the dollar fluctuates in response to changes in its supply and demand relative to other currencies. U.S. and foreign monetary authorities remain committed, nonetheless, to maintaining orderly conditions in the exchange markets and to avoiding speculative upheavals. This is achieved by intervening occasionally in the markets through currency purchases or sales. Currently, the Fed, working in conjunction with the U.S. Treasury, intervenes in the market only for Japanese yen and German marks.

### **A Flurry in Marks**

It is just after noon. Although the European markets have closed officially, some European and New York City banks are still trading. The Fed's traders/analysts are checking their screens to gather the most current exchange rates from traders at commercial banks.

"The mark is up sharply and still moving," Katzive says. He pushes a button on his console and reaches one of the leading German-mark traders in the New York market. The report is brief. "The German banks in Frankfurt are still in the market selling dollars - millions at a clip. The dollar's falling pretty quickly. There are some pretty big sellers in New York as well, and the Chicago traders have jumped on the bandwagon."

Fed traders continue to check with other banks, seeking insights and commentary. Exchange rates of other currencies show a corresponding rise against the dollar, but no one in the market can say why Katzive hears a rumor about a German television report that the Bundesbank, Germany's central bank, may tighten its monetary policy sooner than expected<sup>44</sup>.

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<sup>44</sup> Si el banco central de Alemania, el Bundesbank, va a estrechar la política monetaria—quizás para controlar la inflación— esto hará que los intereses en los bancos alemanes suban. A muchos inversionistas internacionales les va a interesar invertir en Alemania, porque allí los intereses que gana el dinero van a ser mayores. Para invertir en Alemania hay que comprar primero marcos, lo que aumentará la demanda de marcos en los mercados de divisas. El precio del marco tenderá a subir. En este caso, como se ha corrido el rumor de que el Bundesbank puede subir los intereses, los inversionistas están comprando marcos, antes de que esta noticia se haga oficial y empiece a subir el precio del marco. Pero ya los analistas del Fed están detectando este aumento en las compras.

Kos calls Washington and locates Peter Fisher, who still is at the FOMC meeting, and brings him up to date. Immediately after their conversation, Fisher looks at exchange rates on his hand-held electronic screen, then places a call to a senior officer of the Bundesbank to discuss the situation. Kos, meanwhile, passes along the same information to his Treasury colleagues, located in Washington.

The Bundesbank official reached by Fisher complains, with good humor, that he was just heading home for supper when the call came. He says that, in light of the rumor, he is not surprised at the mark's sharp rise. And though he cannot talk about what the Bundesbank might do<sup>45</sup>, he predicts that the run-up will induce more banks to jump into the exchange market to buy marks. He reminds Fisher of their conversation at last month's central bankers meeting in Baste, Switzerland, when they discussed just such a possibility. Believing the flurry will soon pass, he wishes Fisher a pleasant lunch. Fisher, in turn, tells the Bundesbank official to have a good supper and promises to call should there be a significant change in the situation.

The Bundesbank's appraisal is soon confirmed by El-Mekawy and her team of traders/analysts. They've heard from several sources that German banks initiated the run-up while trying to meet their own demand for marks<sup>46</sup>. Within the hour, the market begins to lose steam, and the mark's price begins to fall. The sense of urgency passes.

When his call to the Treasury ends, Kos contacts ElMekawy for an update. He listens carefully to her review of the situation, interrupting with an occasional question. Kos then thanks her and continues on to his other meetings. The full details of the flurry in marks will be reviewed during the Foreign Exchange Trading Desk's daily afternoon conference call with Board staff and Treasury officials.

Downstairs, another assignment is developing for the New York Fed's Central Bank Services department.

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## THE FED AS THE GOLD KEEPER OF THE WORLD

### Afghanistan to Zimbabwe

It's hard to imagine that the gray box in the corner of the Central Bank Services computer room exchanges messages with nearly 200 foreign central banks and international organizations. But that gray box, about the size of a small trunk, is really a network computer that serves as the Fed's communications gateway to all of its international customers.

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<sup>45</sup> Los oficiales del Bundesbank, al igual que los del Fed, no pueden comentar sobre las medidas que va a tomar el banco central

<sup>46</sup> En este caso la subida no la indujo una posible subida de los intereses en Alemania, sino que es esta tarde había mucha gente comprándoles marcos a los bancos alemanes en Nueva York.

Those customers, which span the alphabet from Afghanistan to Zimbabwe, maintain holdings at the New York Fed in excess of \$800 billion - mostly in the form of U.S. Treasury and other securities, deposits, and, of course, gold. The gray box communicates about 1 million messages a year with these customers, a correspondence that results in daily transfers of about \$100 billion in securities, funds, and gold. Each message is many times more secure than regular e-mail, containing, as each does, secret authentication codes to verify that instructions sent to the gray box are legitimate.

Although most of the funds and securities instructions are processed online, instructions for gold—one of the oldest means of payment—are still printed out for delivery to the responsible section. Carmen Acevedo reviews one such message from a major European central bank that instructs the Fed to transfer \$51.2 million in gold from its account to a gold dealer. The Fed isn't told the reason behind the central bank's instruction, but the gold most likely will be sold, put on deposit elsewhere, or sent for storage in its home country. Acevedo sends the message to Barbara Jardine in the Central Bank Services' gold section, who arranges to fulfill the instructions.

### **The Four-Ton Payment**

A \$51.2 million transfer can be made in seconds by a computer bookkeeping entry, but when it's gold, which must be moved out of the Bank's vaults, physical delivery can take days. At a market price of \$350 per fine troy ounce, \$51.2 million in gold weighs more than 4\_ tons. Consequently, the transfer requires moving, under the most stringent security, 340 construction-sized bricks of bullion, each of which weighs about 27 pounds.

In 1997, the New York Fed held about 275 million troy ounces of gold, or 8,600 tons, worth approximately \$12 billion at the official U.S. Government price (\$42.22 per fine troy ounce) and \$100 billion at the market rate of \$350 per troy ounce. The gold, representing the largest accumulation of the metal in the world, belongs primarily to foreign governments, central banks, and official international institutions.

Foreign-owned gold has been kept at the Fed since 1916. The political stability of the United States, its past willingness to buy and sell gold at a fixed price, and the convenience of centralizing gold holdings in the financial capital of the United States are the principal reasons the Fed has become the world's primary keeper of monetary gold reserves.

Security considerations and the sheer weight of stored gold were taken into account in the design of the New York Fed's gold storage area. The gold vault has one of the soundest possible foundations—the bedrock of Manhattan island, nearly 80 feet below Nassau Street.

The vault's interior, encased by steel-and-concrete walls several yards thick, resembles a cell block with 122 triple-locked storehouse compartments. Most hold



the gold of one nation. Each compartment is numbered, but the identity of its user is known by only a few bank employees. A smaller auxiliary vault built in 1963 holds three accounts. One account with 107,000 bars of gold is stacked with bricklayer precision into a solid wall 12 feet high, 10 feet wide, and 18 feet deep.

### Security Is Vital

At least five people are needed to make the transfer requested in the encoded message - two gold stackers and a three-member vault control group - representing the three Fed divisions responsible for stored gold.

The 340 bars are removed from the foreign central bank's compartment, stacked on a wooden pallet, and moved by hand truck to be packed and shipped. As the gold is moved, the control group for the vault records and checks the serial number of each bar. Once the transfer is complete, and the door of the compartment is secure again with two combination locks and a padlock, an auditor's seal is put in place.

While the compartment doors in the gold vault appear to offer only nominal security, the vault's entrance is virtually impregnable. Unlike the hinged vault doors found in banks, the main door of the gold vault is a 90-ton steel cylinder that rotates in a 140-ton steel and concrete frame. The nine-foot-tall cylinder has a narrow passageway cut through its center. When lined up parallel to the frame, this passageway becomes the vault's "door." A few turns of a handwheel revolve the cylinder - and its passageway - 90 degrees and position it crossways inside the frame. A second handwheel lowers the cylinder about three-eighths of an inch and creates an airtight and watertight seal.

Other security precautions are equally strict. No one individual knows all the combinations necessary to open the vault. Closed-circuit television cameras constantly monitor the vault area. An armed guard is on duty whenever the vault is open. Entry to the vestibule outside the vault is strictly controlled.

The vault is shown to individuals and groups that visit the Bank for educational purposes. In 1996, more than 22,000 visitors on scheduled tours entered the display area to view a portion of the world's largest accumulation of gold.

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## THE FED AS AN EXAMINER OF BANKS

An unusually busy day for Barbara Tomsey, the senior bank examiner, finally is winding down. As a member of the New York Fed's team of 325 financial examiners, Tomsey assesses whether or not banks operating in the Second District do so in a safe and sound manner. This is the primary purpose of bank examination.

The New York Fed examines more than 100 bank holding companies, 200 branches and agencies of foreign banks, and 33 state-chartered member banks in the Second District. Nationally chartered banks in the District - all members of the Federal Reserve System - are examined by their chartering agency<sup>47</sup>, the

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<sup>47</sup> *Chartering Agency*: la agencia del gobierno que les autoriza a operar. Puede ser federal o estatal.

Comptroller of the Currency, and their state banking department, while state-chartered, nonmember<sup>48</sup> banks are subject to examination by both their state banking departments<sup>49</sup> and the Federal Deposit Insurance Corporation (FDIC).

Since the early 1980s, the Fed and the banking departments of New York and New Jersey have been taking turns and examining in alternating years those financial organizations considered to be in satisfactory condition. More recently, the New York Fed's examination philosophy has been emphasizing risk-focused reviews in order to allocate more resources to areas of higher concern.

As the Examiner In Charge (EIC) on her current assignment, Tomsey is interested in a broad range of factors, including new financial products and innovations, appropriate risk controls, and compliance with applicable federal laws and regulations. The material she and her team have been collecting over the past eight weeks will ultimately produce a rating. This actual rating is known as CAMELS - an acronym for Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Sensitivity to market risk<sup>50</sup>.

Had any serious problems been uncovered during her team's examination, Tomsey would have notified a senior official in her department, and, together, they would have determined appropriate supervisory measures. But as it turns out, the U.K. bank's U.S. operations are in good shape. This fact was highlighted by Tomsey during her just completed "close-out" —the end-of-examination meeting attended by the U.S. management of the English bank's subsidiary here and by several officers of the Fed's Bank Supervision Group. The meeting culminated with Tomsey's revealing the preliminary CAMELS composite rating given the bank as part of the Fed's "risk-focused examination."

The examination's focus on risk acknowledges the diversity and complexity of banking in a globally wired, 24-hour-a-day marketplace. While no two banks have ever been exactly alike, today's varying emphasis on trading and lending, as well as banks' fluctuating exposure to foreign exchange positions<sup>51</sup> and changes in the value of derivatives<sup>52</sup>, can make any two banks seem part of different industries. The Fed not only recognizes these differences but, by committing more resources than ever to a preexamination review of data, has learned to customize its approach for the specific task at hand.

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<sup>48</sup> **Nonmember:** un banco privado que no pertenece al Sistema de la Reserva Federal. El *sistema* es como un "club" de bancos que se sujetan a la supervisión de la Reserva Federal, a cambio de tener acceso a la Ventana de Descuento (préstamos) y a Fedwire y a otras ventajitas.

<sup>49</sup> En Puerto Rico sería el Comisionado de Instituciones Financieras

<sup>50</sup> A cada banco, después de examinarlo, se le da una puntuación de 1 a 5, según lo que bien que esté en esas áreas de CAMELS.

<sup>51</sup> **Exposure to foreign exchange positions:** Si un banco tiene préstamos u otras inversiones en monedas extranjeras, una subida o bajada de los precios de esas monedas extranjeras hace que sus activos suban o bajen de valor.

<sup>52</sup> **Derivatives:** las inversiones que un banco pueda tener en *opciones (calls y puts), futuros, warrants, etc.* Se llaman derivados porque su valor está derivado de otros instrumentos como son acciones o bonos.

The risk-focused approach<sup>53</sup> also eases the burden of a full examination every year in that it identifies areas of vulnerability. Tomsey, who calls the approach "proactive," replays the close-out meeting in her mind during her commute from the Port Authority back to her home in New Jersey. The high point, she realizes, was the examined banks' appreciation on being made aware of the need for a sharper delineation of duties between traders and the back office<sup>54</sup>. An improvement in this sort of internal control could minimize, if not altogether eliminate, the ability of a renegade trader to cover up bad investments.

Tomsey reminds herself to include this so-called "segregation of duties" problem in the "executive summary," which will lead off the report she must write not only for the management of the examined bank but also for the Fed team that draws the examination assignment the next time around. Then, on Monday she will be off to a new assignment.

Tomsey, like most examiners, travels widely around the Second District, spending about 30 percent of her time on out-of-town assignments, including those with the BOG<sup>55</sup> in Washington and in other Federal Reserve Districts.

However, when asked if she envies examiners just returning from four weeks at branches and subsidiaries of U.S. banks in Hong Kong, Tomsey replies: "It may be an exotic place, but it's not a vacation. The examiners travel for many hours, experience jet lag, and still have to be at work on Monday morning. I'd rather spend Sundays with my children."

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## THE SHOW MUST GO ON

### The Monthly Directors' Meeting

Already back in Manhattan, McDonough participates in a 4:30 p.m. conference call with the directors of the New York Fed, which ends with a vote to leave the discount rate unchanged. The New York Fed's conference calls are held on the first Thursday of each month and, should the month have one, on the fifth Thursday. Since each Reserve Bank is required to establish its own discount rate at least once every 14 days, the setting of the rate is a regular feature of the directors' meeting, after which the secretary of the Bank immediately apprises the BOG in Washington of the directors' decision.

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<sup>53</sup> *risk-focused approach*: examinar solo los aspectos del banco que se ven más arriesgados.

<sup>54</sup> *Sharper delineation of duties between traders and the back office*: traders son los brokers cuyo trabajo consiste en estar comprando y vendiendo inversiones (bonos, moneda extranjera, etc). *Back office* es la sección de la oficina que se dedica a registrar las transacciones de los traders, a escribir las órdenes de compra y venta. Estas funciones tienen que hacerlas personas distintas porque si no un trader podría hacer trampa y vender algo a 100, pero anotarlo como vendido a 98 y quedarse él con los 2 de diferencia, por ejemplo. O vender algo con pérdidas pero anotarlo como vendido a un mayor precio.

<sup>55</sup> Board of Governors of the Federal Reserve in Washington DC.

On the third Thursday, the directors meet face to face at the New York Fed, generally at 2:00 p.m. A set of printed charts depicting the state of the economy and operations at the Bank marks each director's place at the 16-foot-long conference table, above which hang two milk-glass chandeliers, both set in a hand-wrought iron frame. Portraits of the Bank's former presidents adorn the walls on three sides of the room, which is further distinguished by its carved, English oak paneling and a fireplace near the door.

All nine directors have three-year terms. Three must be bankers who are elected by Second District member banks: one from the District's largest-size banks, another from the medium-size banks, and the third from the smallest banks. Member banks elect three other directors, none of whom have any banking affiliation and who come from the ranks of agriculture, commerce, industry, services, labor, and consumers. The BOG in Washington appoints the remaining three directors, who also may not have any banking affiliation. Aside from the three who are bankers, directors of the New York Fed have included senior executives of public and private corporations, the head of a labor union, university administrators, and partners of law firms.

At the conference-call meeting, before voting on the discount rate, the directors listened to Bank officers report on domestic and international financial-market conditions, loans to depository institutions, and recent economic developments. They also approved a capital expenditure to upgrade one of the bank's computer systems - an issue on which they had been briefed in advance - before discussing some of the Bank's goals and objectives for the coming year.

### **Meet the Press**

For Dahlia Harmon, a spokesperson for the Fed, preparation for the Thursday press briefing starts early in the week with the gathering of preliminary data. By late Wednesday, these bits of information have been compiled into a complex but still incomplete profile of the nation's money and banking activities. The final statistics will not be available until Thursday afternoon.

Harmon brings notes with her to the briefing, including details of key statistics, her commentary, and information she has gathered from Fed staffers involved with monetary analysis and the markets. Piece by piece, a picture of what has happened in the connected world of banking and monetary policy since last week's press conference is assembled and analyzed.

The research is important. From it, Harmon can identify significant trends and developments, which enable her to anticipate questions the reporters might ask.

The briefing is a decades' old tradition in the financial community, attracting reporters from about a dozen domestic and foreign wire services. At 4:00 p.m., Harmon begins by distributing printouts of key banking and financial statistics. After the journalists have had a chance to review the data and begin preparing their reports, Harmon starts discussing and highlighting the data.

The first item on the agenda is the basic reserve position of the six major New York City banks that update their positions every week. During the next 25 minutes, Harmon goes over an additional four to five statistical releases containing some 2,000 pieces of information.

Throughout her presentation, Harmon speaks over the rustle of turning pages and the muted phone conversations between reporters and their editors. She also fields the occasional question, being careful in her answer not to violate guidelines that bar her from discussing non-public FOMC policy deliberations, the Fed's expectation for interest rates or exchange rates, the activities of Fed customers, and supervisory matters.

After distributing national and local data, Harmon summarizes the week's developments in the credit markets, reviewing the operations of the Domestic Open Market Desk and explaining any unusual occurrences. Shortly before 4:25 p.m., weekly money supply figures are distributed.

Most of the reporters spend the next five minutes or so on the phone dictating last-minute statistics; others return immediately to their offices. A few remain to chat informally, often trying to assess the importance of some statistic or financial event. Exactly at 4:30 p.m., the release time for most of the data, the wire services report simultaneously on the key figures.

### **Closed but Not Finished**

Lower Manhattan is bustling again, as office workers file out of skyscrapers for their commute home. Inside the New York Fed, some 80 feet below sea level, the 90-ton door of the gold vault now is locked. And though the day has ended for most people above the vault, more than 200 members of the Fed's evening work force already are on duty. An additional 414 will start their day sometime during the night.

The post office remains active, sending out the day's accumulated mail. Around midnight, its night crew of eight workers will begin sorting tons of incoming mail for delivery the next day. Employees of the accounting department continue to work as well, recording all debits and credits to bank and thrift reserve accounts. Computer operations also will keep going around the clock, as will the protection department. Although valuables are locked up during the night, constant surveillance is maintained.

By 5:29 p.m., public activities of the Bank have ceased, and many on the day staff have left. A minute later, Eddie Clarke, the special-duty guard at the Fed's front entrance on Liberty Street, taps a button on a console in the lobby. The action sets in motion the teakwood doors - three stories high and six inches thick - causing them to glide curtain-like across the Fed's front entrance. The sonorous thud of the doors' coming together ends, officially and symbolically, the business day at the Federal Reserve Bank of New York.

Outside, a thunderstorm gathers, reminding commuters of the hurricane that's still several hundred miles out to sea. But that hasn't stopped the Bank's post office and other operations from considering contingency measures to cope with potential delays. Inclement weather could even slow the delivery of checks to the banks and thrifts on which they were drawn. If an unwanted rise in float or an increase in bank reserves results<sup>56</sup>, the Domestic Open Market Desk may have to sell securities in a few days to offset it.

For Clarke, though, it's enough to await the departure of McDonough. The president of the New York Fed, back from the FOMC meeting in Washington in time for a conference call with his own board, is in a final briefing session before a long-scheduled tour of Asia. Accompanying McDonough on that tour, slated to begin the following day will be Terrence J. Checki, the executive vice president of the Bank's Emerging Markets and International Affairs Group.

Checki's group, which prepares integrated and timely analyses of economic, financial, and political developments in emerging markets, has been especially attentive to Hong Kong since its transition to Chinese rule<sup>57</sup>. That, in fact, is the subject of the briefing session, as McDonough's itinerary includes speaking engagements before the Hong Kong Monetary Authority and the People's Bank of China.

As Checki assists McDonough in some last-minute tweaking to the president's speech, special-duty guard Clarke continues his watch. The after-hours vigil seems appropriate in that, although the business day is over, a day at the Fed never really ends.



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<sup>56</sup> Si los cheques se quedan sin cobrar, porque no llegan al Fed por el mal tiempo, entonces aumentará el *float*: los bancos tendrán más reservas disponibles, porque no les han sacado dinero de sus cuentas en el Fed. Esto significa que habrá más “liquidez en el sistema”: más dinero en manos del público. Para contrarrestar este aumento, el Fed tendrá que vender bonos a los bancos, para sacarles dinero de sus cuentas.

<sup>57</sup> Hong-Kong pasó de manos británicas a manos chinas en 1997.

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**PREGUNTAS DE REPASO**

1. ¿Qué áreas geográficas dependen del New York Fed?
2. ¿Dónde están las cuatro oficinas dónde opera el New York Fed?
3. ¿Qué tres operaciones hace la oficina de Buffalo?
4. ¿Cuáles son los objetivos de la Reserva Federal?
5. ¿Cuál es la operación principal de la oficina de EROC?
6. ¿Cuántos billetes falsos se encuentran cada día en EROC?
7. ¿Quién imprime los billetes americanos?
8. ¿Que tiene que dar la Reserva Federal a cambio de los billetes que recibe?
9. ¿Donde se fabrican las monedas —no los billetes— americanos?
10. ¿Por qué hay pocos billetes para procesar en EROC los lunes?
11. ¿En qué épocas del año entran más billetes al Fed y en qué época salen más?
12. ¿Qué porcentaje de todos los cheques escritos en los EU se procesan a través de la Reserva Federal?
13. Describa cómo es el proceso por el que un cliente en Syracuse, Nueva York, puede cobrar un cheque girado contra una cuenta de un banco de California, sin tener que viajar hasta California a cobrarlo.
14. ¿En qué consiste el *float* bancario?
15. ¿Qué es un ACH?

16. Explique cómo puede usarse un ACH para que un individuo pague la hipoteca de su casa.
17. ¿Qué porcentaje de los pagos hechos en EU por ACH son manejados por el Fed? ¿Qué porcentaje de los pagos hechos por cheque son hechos a través del Fed?
18. ¿Qué tres servicios realiza la Reserva Federal para el Tesoro de los EU?
19. ¿Qué es un *Clearing House*?
20. ¿Qué es el Fedwire?
21. ¿Qué es el Beige Book, el Blue Book y el Green Book de la Reserva?
22. ¿Por qué el presidente del Fed de Nueva York tiene siempre voto en el FOMC, y no rota cada año, como los demás presidentes de los otros 11 distritos?
23. En qué consisten las “*domestic open market operations*”?
24. ¿Por qué dice McDonough en la reunión del FOMC que le preocupa que el aumento que está habiendo de las reservas pueda hacer que suban las tasas de interés?
25. ¿En qué consiste el estrechamiento de la política monetaria? ¿Qué pasa en el país si se baja el federal fund rate?
26. ¿Qué es el Domestic Open Market Desk?
27. ¿Qué puede hacer el Open Market Desk para que haya más dinero en manos del público en EU?
28. ¿De qué tres formas se comunica al público lo que se discutió en la reunión del FOMC?
29. ¿Qué dos variables son las que tiene que estar controlando el Open Market Desk?
30. ¿Qué causas pueden hacer que el *fed fund rate* baje?



31. ¿Qué son los Repurchase Agreements? ¿Cómo se puede aumentar la cantidad de reservas en los bancos a través de estos Repos?
32. ¿Cómo se hace una subasta para comprar RP?
33. ¿Para qué se usa la ventana de descuento?
34. ¿Por qué le puede preocupar al Fed lo que se esté pagando ese día por los yenes de Japón? ¿Qué efecto puede esto tener en la economía americana?
35. ¿Como el Fed puede hacer que suba el precio del marco alemán frente al dólar americano?
36. ¿Por qué el marco empezó a subir ese día qué describe la lectura?
37. ¿A quién pertenece el oro que hay en el Fed de NY?
38. ¿Qué es CAMELS?
39. ¿Cuál fue la recomendación de la examinadora Tomsey al banco británico?
40. ¿Quiénes son los nueve directores del Banco de la Reserva Federal de Nueva York?