

Selected Central Banks' Economic and Financial Literacy Programs

This study examines the type and extent of information central banks provide to advance economic literacy in general and financial literacy in particular.

- Some 30 central banks across the world provide financial education products of varying complexity for different target groups, some in close cooperation with other institutions.
- Some central banks consider their financial education activities a core competence and give them a prominent role, whereas the “educational visibility” of others is limited. Several central banks have recently launched financial literacy campaigns.
- Products designed to make people financially knowledgeable are aimed at key target groups, basically children, adolescents, students and teachers.
- Print products – once the product of choice – have been losing importance. Conversely, central banks use more and more modern knowledge transfer methods, in particular (multilingual) multimedia and e-education packages ranging from online games to multiyear educational programs. Moreover, some central banks have invested heavily in establishing special visitors or training centers, or have pooled knowledge e.g. at money museums.
- Central banks' educational Internet resources differ extensively in scope and presentation; only few central banks' websites provide truly comprehensive and easily accessible information.
- Financial knowledge transfer appears to work best from simple media and for products that are very strongly focused on individual benefit.

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1 Mobilizing Financial Education to Create Awareness for the Economic Benefits of Central Banking

Central banks' contribution to strengthening citizens' financial capability and economic literacy is an excellent investment, simply because it is investment in knowledge, which according to Benjamin Franklin, “always pays the best interest.” A number of central banks have thus lately expanded or updated their economic and financial information products and more or less institutionalized educational activities as part of their functions. To this end, many central banks have sought out national or international institutions with similar

objectives as cooperation partners in promoting financial literacy whereas some have taken the initiative to create new platforms. Overall, central banks' financial education activities are typically designed to complement the programs offered by the education system in general (Stark, 2006). Among central banks worldwide, the Federal Reserve System (Fed) in the United States has assumed a leading role on financial education. Its activities already have a long history, and they are informed by the Fed's fundamental commitment to providing financial knowledge, as evidenced by the following quote: “The Federal Reserve will be a national leader and trusted partner in the provision of economic and personal finance edu-

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cation in order to offer the public the opportunity to understand and participate fully in the U.S. economy.” (Malin, 2006). In Europe, the educational activities of the Deutsche Bundesbank or of the Bank of England can look back on a long tradition.

The Oesterreichische Nationalbank (OeNB) has also offered a wide range of financial education products for many years (Schlögl, 2007). The OeNB has been intent on steadily expanding this range, and made sure to thoroughly revise its education products following Eurosystem entry. Nevertheless, polls such as the quarterly OeNB Barometer survey signal that Austrians still have a sketchy understanding of monetary policy and of central banks' general and economic policy role and tasks. Part of the reason may be that communications media have not been targeted explicitly enough at particular audiences, which may in turn have responded with insufficient interest. Schools evidently need to make more room for financial and economic education, too: even after graduating from a secondary school after eight or nine years, adolescents display knowledge gaps (Schlögl, 2007; Schmid, 2006). For this reason, the OeNB decided to step up its financial education activities and initiated a campaign to strengthen Austrians' financial competence and economic literacy. This campaign will run up to 2010.

This contribution takes stock of the activities of central banks besides the OeNB. The main questions we try to answer are:

- Why do central banks undertake economic and financial education activities? (section 2)
- How do central banks transfer economic knowledge? (section 3)

- What role does financial education play among central banks' responsibilities? (section 4)
- Which strategies underlie central banks' financial education activities and what are essential ingredients for their success? (section 5)
- What media do the central banks target, and what programs and instruments do they use? What are the target groups for the financial education activities? What topics are covered? Who do the central banks cooperate with on financial education? (section 6)
- What does the profile of strengths and weaknesses look like? What conclusions may be drawn? (section 7)

2 Financially Literate Citizens Are Good for Society – And for Central Banks

Why do central banks across the world undertake financial education activities? Cathy E. Minehan, president and chief executive officer of the Federal Reserve Bank of Boston (Minehan, 2006) put the answer simply at a conference in Warsaw in 2006: “... central bank support for economic and financial education is a form of enlightened self interest.” And why is this so? Gnan et al. (2007) cite five main reasons for central banks' interest in financial education: (1) to enhance the effectiveness of monetary policy, (2) to ensure the smooth functioning of financial markets, (3) to support sustainable economic policies, (4) to promote economic and financial literacy as a public good and, by doing so, (5) build their reputation and promote acceptance for their actions. In other words, consumers who understand the workings of an economy and who

are financially competent reinforce market efficiency, in turn providing good conditions for sustainable economic growth and financial stability. Along these lines, one of Minehan's (2006) key messages is: "Economies are made up of individuals, and the better informed and educated their economic decisions, the more likely the economy's prosperity."

All of these dictums – "Knowledge is power" (Santomero, 2007), "Knowledge is your greatest asset" (Duguay, 2007), and "Informed consumers are more capable, competent and self-reliant" (paraphrasing Weber, 2007) – also apply to financial and economic knowledge. Therefore, economic literacy and financial competence play a strong role in society and the economy, because greater knowledge helps people make wiser financial decisions and protects them from making borrowing, savings or investment blunders. A number of studies (Hogarth, 2007) have shown that greater financial literacy among households correlates with a more favorable financial situation. However, financial illiteracy is widespread. A study drawn up for the Netherlands (de Nederlandsche Bank, 2006) reveals that only 40% of the respondents answered five fairly simple questions on interest rates and inflation fully correctly. Only 6% were able to answer all eight additional questions on the potential risks and returns of investing in stocks, bonds or passbook savings, and on house

price developments, whereas 16% were able to provide no more than one correct response. The respondents' assessments of the rate of economic growth and of inflation were just as disappointing. One result of this lack of knowledge is that people are careless in handling their financial affairs. This creates problems of an alarming proportion in many countries, even in highly developed economies (OECD, 2006; Smith, 2006): Financial mismanagement includes hopelessly overdrawn credit card and checking account balances, to which banks may even respond by canceling accounts; inadequate knowledge about stocks and investment products; insufficient retirement savings; or the inclination, especially of young adults, to procrastinate when making financial decisions.² At the same time, an overwhelming proportion of the population wants more information about financial topics, as a German study (Leinert, 2004) shows, calling for financial education to be part of school curricula or demanding that employers offer information about how to provide for retirement.³

3 Central Banks Transfer Economic Knowledge at Several Levels

Central banks require knowledge to fulfill their responsibilities and are thus important knowledge centers of economies. Central banks range among the most prolific producers of knowledge.⁴ Moreover, central banks'

² In Austria, some 300,000 people – or one in 25 persons – do not have a bank account (Eisenmenger, 2007). In 2006, around 7,500 people declared personal bankruptcy, up by nearly 12% from 2005 (ASB-Schuldnerberatungen, 2007). Almost 50,000 people consulted a debt management center in 2006; their average debt totaled roughly EUR 38,000 per person.

³ 95% of German respondents called for financial education at schools. 85% want employers to be obligated to organize presentations of information about company and individual retirement provision (Leinert, 2004).

⁴ The OeNB's knowledge activities, e.g., have been recorded and presented annually in an Intellectual Capital Report since 2003.

knowledge pool is expanded steadily through their contacts with the general public, policymakers, and economic and (economic) science institutions. These contacts enable central banks to identify new developments and academic findings without delay and to benefit from them in fulfilling central banking functions. As central banks must be accountable and transparent vis-à-vis the general public⁵ (ECB, 2002; Stark 2006), they have also introduced a broad range of instruments to enable knowledge transfer.

Economic education activities represent an important and yet specific cornerstone of central banks' communications strategies. The type of knowledge transferred depends on the target group:

Among the important audience of schoolchildren, primary schoolchildren (aged up to 11) are the first target group. The aim is to familiarize these children with basic, easy to understand money concepts in an entertaining fashion. Second, education initiatives for secondary schoolchildren (aged 12 to 19) are based on special education packages intended to complement the school curriculum and focusing on money management and economic fundamentals.⁶ Many central banks distinguish between a greater number of age groups (see below, e.g. the Bank of England).

(Prospective) college or university students are the third target

group. Many central banks have prepared advanced level packages containing a mix of academic literature, presentations, roundtable discussions and special seminars or courses. Every year, the OeNB, for example, gives about 40 students from technical colleges the opportunity to complete their mandatory half-year internship at the central bank.

The fourth target group is made up of mainly secondary school teachers. A number of central banks have prepared special packages for this target group, given that it has a strong multiplier effect. Economics seminar series (partly held together with other teacher training institutions, such as Volkswirtschaftliche Gesellschaft in Austria) are one such focus. Another focus is targeted teacher training material (handbooks, slides, quizzes, questionnaires) on money, monetary policy and economics.

Additionally, some central banks periodically run information campaigns, availing themselves of the mass media – TV, radio, high-circulation newspapers and news magazines – as multipliers to inform the general public about monetary policy and other activities and areas with the intention of enhancing financial literacy.⁷

In addition to producing knowledge themselves, central banks also benefit from external expertise in their fields. Therefore, central banks promote a wide variety of academic activity and facilities, ranging from

⁵ See also www.oenb.at/en/geldp_volksw/geldpolitik/merkmale/institutional_features.jsp

⁶ Or, as Manfred Weber puts it more succinctly in the newspaper *Börsen-Zeitung* of June 16, 2007: "Wirtschaft in der Schule: Bildung, die Früchte trägt" ("Economics at School: An Educational Investment that Yields Returns") (Weber, 2007).

⁷ In the fall of 2004, for instance, the OeNB conducted a comprehensive information campaign with the slogan "I work hard for my money. Good that every euro is worth it." Using ads, TV spots, advertorials and media cooperations, this campaign maximized impact and media reach by combining marketing and public relations activities.

special research institutions, which they finance in part or completely, to endowments and funds that provide research funding, to grants, awards for academic work, subsidies, sponsorships and donations. This study will only refer to financial literacy-related educational facilities and activities (seminars for central bank employees or the public, special awards in tertiary education).

4 Finance Education Activities Have Low Visibility among Central Banks' Responsibilities

Central banks still differ substantially from each other with regard to the visibility of their financial literacy initiatives. Because providing financial education is neither among the statutory duties of central banks (with the

Table 1

Overview of the Educational Mission of Selected Central Banks		
Central bank	Educational Mission	Source
Oesterreichische Nationalbank	Educational activities represent an important cornerstone of the OeNB's public relations mission.	Liebscher, K., OeNB press release of December 14, 2005
	The OeNB is dedicated to improving economic and financial literacy, because knowledge allows consumers to make informed financial decisions about investments and retirement savings.	Liebscher, K. (2007)
Deutsche Bundesbank	The Deutsche Bundesbank promotes economic education The Deutsche Bundesbank has been actively committed to providing basic knowledge about economics and monetary issues for more than 30 years. A good understanding of how the economy and money work is especially important for young people, who have to deal more intensely with economic and financial issues once they start to make a living. Every year, the Deutsche Bundesbank provides schools with updated teaching materials about money and monetary issues free of charge.	Extract from a press release issued by the Deutsche Bundesbank on January 15, 2007 (translation)
National Bank of Belgium	The National Bank is an active partner in education and for the academic world.	website of the Nationale Bank van België/the Banque Nationale de Belgique (www.nbb.be)
Bank of England	The Bank offers a range of resources and services to build awareness and understanding of its role and functions, and of central banking more generally.	website of the Bank of England (www.bankofengland.co.uk)
Magyar Nemzeti Bank	The most important mission of the MNB's Visitor Centre is to provide information concerning the basic functions of the economy, the role of money and its history in Hungary.	website of Magyar Nemzeti Bank (Visitors' Centre) (english.mnb.hu)
Narodowy Bank Polski However, it is especially desirable to give the young people a grasp of the basic principles of the economic system we live in. One of the Bank's goals is to ensure that economic literacy becomes a priority on the national education agenda. To function successfully for the young people in the workforce is to close the gap between what they ought to know and what they are being taught at school.	website of Narodowy Bank Polski (www.nbp.pl)
Federal Reserve System	The Federal Reserve has been involved in economic education initiatives for some time. We consider them integral to our mission. As you know, the Fed serves a three-fold function in our economy; it conducts monetary policy, supervises and regulates banks and financial institutions, and maintains an effective payments system. Our economic education efforts are important to, and intertwined with, all three functions.	Santomero, A. M. (2003)
	Recognizing the importance of educated and informed Consumers to the operation of efficient markets, the FED has been an active provider of economic literacy materials to help the students and the public better understand the U.S. economy and the role of the FED. Each of the 12 FED-banks supports	Braunstein, S. and C. Welch (2003)

exception of the Fed) nor among their core competences, mission statements or descriptions of main central banking tasks do not specifically reflect educational commitments. Such commitments can be discovered only when taking a broader and deeper look at central banks' activities (see summary table 1 for a selective overview). However, the content of this commitment is quite disparate from one central bank to the other. The range spans narrowly defined activities for a very small target group (e.g. schools and adolescents) to a very broad definition (education or economic education). Some central banks subsume the entirety of their education initiatives in special "money museums." Central banks generally organize their educational activities as part of their public relations activities. The communications media of choice for central banks' educational mission are press releases, references in speeches (Stark, 2006) or special newspaper articles (Kotz, 2007), and of course the Internet.

5 Strategies and Success Criteria Underlying Central Banks' Financial Education Initiatives

Gnan et al. (2007) examine the motives and goals that central banks have for their financial education activities. How can these goals be achieved? There are three different strategies to reaching those goals:

- 1 Creating awareness of the need to enhance citizens' basic economic and financial literacy at various levels: among policy-makers, education system stakeholders, the mass media community and the general public;

- 2 Improving access to information about economics and finance, and spreading information for consumer protection purposes;

- 3 Developing and improving citizens' understanding of basic economic concepts.

While the strategies and methods used to support the attainment of these goals have common denominators, they differ in practice and may cover a broad range, depending on the scope of activities undertaken by each individual central bank. These activities comprise numerous educational materials and various courses and seminars, partly in dedicated educational facilities, e.g. money museums at many central banks. Moreover, central banks also seek bilateral or multilateral cooperation with educational facilities, consumer protection organizations, financial market authorities or institutions, municipal facilities, trade associations and even financial industry partners. National and international networks as well as common online platforms represent an additional avenue through which to reach target groups.

Representatives of central banks with a strong educational commitment point out that specific criteria must be observed to reach the respective audiences and to actually enhance economic and financial literacy. A key factor is (1) the support and active participation of the central bank's management itself (Hogarth, 2007; Minehan, 2006). The former Chairman of the Federal Reserve Board, Alan Greenspan, and Ben Bernanke,⁸ its current Chairman, have repeatedly cited raising economic literacy as a priority among central banking

⁸ See Bernanke (2006).

tasks in their speeches. This also has a positive impact on the resources made available. A second factor with a positive impact (2) is the advantage central banks have as independent and objective institutions with a reputation for integrity, credibility and impartiality. People trust their central banks and expect them to provide fair and truthful information. A third success factor is (3) readability and user friendliness. Educational materials must be easy to use e.g. at schools, not time-consuming or cumbersome. Another success factor is (4) clarity and attractive design (Ganley, 2006; Minehan, 2006). Central banks are well advised to seek the support of experts in the fields of education, teaching, teaching methods and design. In this vein, some central banks even use comics and cartoons to get their message across or cooperate intensely with marketing, education and public relations experts to design their educational products.⁹ Finally, (5) research promotion with the aim of identifying best practice, and (6) central bank staff training are crucial to the success of a central bank's education activities.

6 Financial Education Programs: Comprehensive at Some Central Banks

6.1 Taking Stock of Selected Central Banks' Financial Literacy Initiatives

The review of individual central banks' education activities presented below is based on (1) presentations

of individual countries' systems in a conference volume of Narodowy Bank Polski (2006), (2) OECD studies and reports, (3) research on the central banks' websites, and (4) bilateral contacts to some central banks. In some respects, this analysis of central banks' information products may no longer be fully accurate at the time of reading, as some central banks are currently working on a relaunch of their education concepts for 2007 or later.¹⁰ Another drawback of the research on central bank websites is that the specific and comprehensive products are frequently available only in the national language version; the analogous English-language websites often provide only synoptic information, if any. This makes it quite difficult to take stock of the various financial literacy initiatives and compare them across central banks. Finally, central banks post the relevant information on very different parts of their respective websites, and the information is frequently difficult to find.

6.2 Many European Central Banks Offer Innovative Financial Education and Plan to Extend It

We included some 30 central banks from all over the world in the stock-taking exercise. As tables 2.1 and 2.2 show, these central banks offer audience-specific financial and economic education packages and programs aimed at children in primary and secondary school and at students of technical colleges and universities. In addition, many central banks support

⁹ Such cooperation has also proved very valuable for the OeNB, which cooperated intensely with experts from the areas cited in developing its educational products. The Swiss National Bank also paid special attention to these aspects in its 2007 relaunch of educational products (see also section 6.2).

¹⁰ Currently, e.g., the Swiss National Bank is working on a relaunch (the main features of which can be found in the comparison in this study); moreover, the Central Bank and Financial Services Authority of Ireland and the Banco de España are preparing for a relaunch of their education products. The current status of the education work at these central banks is reflected in the presentation in this study.

Table 2.1

**Central Banks' Economic and Financial Education Products:
Target Groups and Educational Facilities and Services – Part 1**

	AT	AN	AU	BE	CA	CH	CZ	DE	DK	EE	ES	ECB	FI	FR	HU
Target groups															
Children	x				x	x						x			
School children/adolescents	x	x		x	x	x		x				x	x		x
Students/universities	x	x	x		x			x					x		x
Teachers/seminar participants	x	x	x			x		x				x	x	x	x
Campaigns/mass media	x	x										x	x		
Research institutions/research funding/foundations	x		x	x	x	x		x	x			x	x	x	x
Educational facilities and services															
Money museum (knowledge pool, exhibitions)	x		x	x	x		x	x	x	x				x	x
Open house							x			x					
Visitors centers		x												x	x
Guided tours															
Training facilities		x				x	x	x			x				
Training programs/lectures	x	x				x	x	x	x					x	x
Special seminars	x	x		x	x	x	x	x				x			
E-education (website, online)	x	x	x		x	x	x	x			x	x	x		
E-education portal								x							
EcFin promotion group								x							
Competitions/prizes/awards	x	x				x									
Fundraisers (for educational purposes)															
Euroservice											x				

Source: Websites of the respective central banks, Narodowy Bank Polski, bilateral contacts with some central banks.

Note: AT = Oesterreichische Nationalbank, AN = Eastern Caribbean Central Bank (monetary authority for Anguilla (AN), Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia and St. Vincent, the Grenadines), AU = Reserve Bank of Australia, BE = Nationale Bank van België/the Banque Nationale de Belgique, CA = Bank of Canada, CH = Swiss National Bank, CZ = Česká Národní Banka, DE = Deutsche Bundesbank, DK = Danmarks Nationalbank, EE = Eesti Pank, ES = Banco de España, ECB = European Central Bank, FI = Suomen Pankki – Finlands Bank, FR = Banque de France, HU = Magyar Nemzeti Bank.

research and science institutions and award various prizes for achievements in the field of economics. To round out the picture, tables 2.1 and 2.2 also provide an overview of education facilities established by individual central banks. The OeNB was included in the comparisons in tables 2.1 and 2.2, but for more detailed information about financial education initiatives of the OeNB and other Austrian providers, see Schlögl (2007) in this issue.

ECB Information Material in over 20 Languages

The ECB's flagship educational product is an information kit for pupils and teachers entitled "Price stability:

why is it important for you?" This kit, which was developed in cooperation with the Eurosystem central banks in 2005 and is now available in 22 languages, launched the ECB's financial education program, which is to be expanded substantially in the next few years. In mid-2007, the ECB added a set of powerpoint slides ("Facts") for presentations about the EU, the Eurosystem and Eurosystem monetary policy to its educational products and services. The ECB moreover invites students and graduates of economics to join dedicated programs (Wim Duisenberg Research Fellowship Programme, Lamfalussy Fellowship Programme, Student Research Assistantship Programme).

Table 2.2

**Central Banks' Economic and Financial Education Products:
Target Groups and Educational Facilities and Services – Part 2**

	IE	JP	KR	LT	MX	NL	NZ	PL	SE	SG	SK	TR	UK	US	ZA
Target groups															
Children		x				x	x	x					x	x	
School children/adolescents	x	x		x	x	x	x	x	x				x	x	
Students/universities	x	x	x	x	x	x	x	x		x			x	x	
Teachers/seminar participants		x		x			x	x		x			x	x	
Campaigns/mass media								x		x				x	x
Research institutions/research funding/foundations			x			x			x				x	x	
Educational facilities and services															
Money museum (knowledge pool, exhibitions)				x	x	x		x					x	x	x
Open house														x	
Visitors centers			x			x							x	x	
Guided tours						x								x	
Training facilities			x	x			x				x			x	x
Training programs/lectures		x	x								x		x	x	
Special seminars		x	x								x		x	x	
E-education (website, online)				x	x	x		x	x		x	x	x	x	x
E-education portal								x						x	
EcFin promotion group	x						x							x	
Competitions/prizes/awards				x			x	x	x					x	
Fundraisers (for educational purposes)													x		
Euroservice															

Source: Websites of the respective central banks, Narodowy Bank Polski, bilateral contacts with some central banks.

Note: IE = Central Bank and Financial Services Authority of Ireland, JP = Bank of Japan, KR = Bank of Korea, LT = Latvijas Banka, MX = Banca de México, NL = De Nederlandsche Bank, NZ = Reserve Bank of New Zealand, PL = Narodowy Bank Polski, SE = Sveriges Riksbank, SG = Monetary Authority of Singapore, SK = Národná Banka Slovenska, TR = Central Bank of the Republic of Turkey, UK = Bank of England, US = Federal Reserve System, ZA = South African Reserve Bank.

Deutsche Bundesbank Pursues Innovative Strategy by Participating in Larger Platforms on Money Topics

The Deutsche Bundesbank pursues educational activities e.g. by contributing to the Internet portal www.kursraumgeld.de. This information portal bundles all educational materials that the Bundesbank, private banks, savings banks, Volksbank and Raiffeisen credit cooperatives, insurance companies and the respective associations provide for school curricula on the issues of money management. Up-to-date information is well presented and easily accessible. The menu provides links to material on “the role of banks and insurance companies in the economy,” “pay-

ments,” “investment,” “financing and lending,” “monetary policy” and “old-age provision”; users may access order forms on the providers’ websites through these links. Another financial education platform that the Deutsche Bundesbank runs in cooperation with Deutsche Sparkassen- und Giroverband (www.geldundhaushalt.de) covers the four service pillars advice, presentations, Internet platform and cooperation (Wirz, 2007). By participating intensely in both platforms, the Deutsche Bundesbank has come to play a leading role in financial education in Germany. Moreover, the Deutsche Bundesbank has a 30-year-plus track record of providing specialized education material (Deutsche

Bundesbank, 2007). The bank's Money Museum, which has a separate website,¹¹ serves as an interactive education center that attracts some 30,000 visitors a year. Special German-language products for secondary school-age children, such as "Unser Geld" (600,000 print copies) and "Geld & Geldpolitik" (200,000 print copies) are updated annually. The online game "Mission Bundesbank" is another education tool. The Deutsche Bundesbank holds yearly summer workshops for students and awards up to EUR 30,000 of scholarships. A foundation established in 2002, Stiftung Geld und Wahrung, provides about EUR 50 million for the promotion of scientific activities. Moreover, the Deutsche Bundesbank organizes a broad range of seminars: The Bundesbank recruits some of its employees from a Bundesbank-operated technical college with a six-semester course of banking studies for secondary school graduates; moreover, university graduates are offered a 21-month internship (Kotz, 2007). The Bundesbank operates a training center at Eltville, not far from Frankfurt am Main, where numerous courses are held mainly for central bank employees. Together with the OeNB, the Deutsche Bundesbank has trained over 600 banking supervisors from more than 30 financial supervisory authorities in 25 countries since 2004 within the framework of a special supervisory training program.

The Bank of England's Key Role among Economic Education Providers in the United Kingdom

The provision of financial and economic education is split among several institutions in the United Kingdom (Ganley, 2006). The Bank of England provides a broad range of educational products and services to raise awareness and promote understanding of its role and functions and central banking more generally among various target groups ranging from schoolchildren to the general public. Personal finance aspects are specifically covered by the Financial Services Authority in cooperation with the financial industry. Business-related information falls within the ambit of the finance ministry and financial industry associations. The overview given below basically relates to products and services provided by the Bank of England. The money museum (seven employees), the Bank of England's main education center, provides a broad range of information about monetary topics and regularly organizes exhibitions. Some 60,000 visitors annually have the opportunity to take a guided tour of the Bank of England. Special learning resources have been put together for schoolchildren – the Pounds & Pence package (for 9 to 11 year olds) and Made of Money (for 14 to 16 year olds). In cooperation with the newspaper The Times, the Bank of England also runs Target Two Point Zero, the Bank of

¹¹ The visitor to this website is greeted very invitingly: "Money plays an important role in every area of our lives. But only stable money is good money. The Money Museum of the Deutsche Bundesbank shows the fascinating world of monetary and foreign exchange policy and offers an introduction to the history of money." For more information, go to www.geldmuseum.de/index.en.php

England/Times Interest Rate Challenge – a special competition that gives students aged 16 to 18 a chance to take on the role of the Bank of England's Monetary Policy Committee. Yet another learning resource is available for college and university students. Seminars and handbooks on central banking topics provided by the Centre for Central Banking Studies and research funding round out the Bank of England's educational contributions at the scientific level. The Bank of England's website (www.bankofengland.co.uk) is exemplary in that it prominently displays its financial literacy activities by listing education as a main menu item. The members of the Bank of England's Monetary Policy Committee hold up to 60 lectures a year at locations throughout the country.

Other European Central Banks: Selected Financial Education Activities

Some of the most outstanding activities among the range of financial literacy activities of individual central banks are presented below. The approach that Suomen Pankki – Finland's Bank has chosen is especially remarkable: the Bank of Finland Museum provides e-education services independently of the central bank's website. The central bank, moreover, established a separate institution in 1998 to perform in-depth economic research, BOFIT (Bank of Finland's Institute of Economics in Transition), which holds seminars regularly and runs a library.

De Nederlandsche Bank has established a visitors center that attracts some 10,000 information seekers annually. The bank seeks to draw in double the number of visitors from 2007, among other things with a newly set up program for 10- to 14-year-olds.

At the visitors center, students can play an interactive game, How to score with policy, to find out about monetary policy. As an additional educational resource, the bank has compiled a school information kit (The Money Box), which has been distributed to about 1,800 schools. On a scientific level, the bank offers seminar series accessible to the general public and special courses for students and post-graduate students. The bank opened a money museum in May 2007 (see www.geldmuseum.nl/web/show).

The Nationale Bank van België/the Banque Nationale de Belgique considers itself an active partner in education and for the academic world. The bank runs a money museum with 15 rooms (the museum is also responsible for developing educational materials for schools), provides a set of indicators online (under the website's main menu item education) and is actively engaged in promoting economic research.

Danmarks Nationalbank's money museum was opened to the public in 2002. The Danish central bank focuses its economic education efforts primarily on lecturers drawn from the pool of young central bank employees, who organized well over 100 events attended by a total of some 4,000 participants in 2006.

After having operated an online role-playing monetary policy game called Stargold as an outlet for its external education activities with the central bank president as a player character, Sveriges Riksbank is currently working on a similar new game. In 1968, Sweden's central bank established the Prize in Economic Sciences in Memory of Alfred Nobel; the annual prize amount is currently about EUR 1 million.

Banco de España provides educational resources, mainly about financial topics, on a separate (Spanish only) website (<http://aulavirtual.bde.es>). The bank is working on a similar portal focused on basic economic literacy especially for children and adolescents.

The Banque de France has focused its economic education initiatives primarily on monetary policy and macroeconomics and provides about EUR 2 million a year for research via a foundation. The bank partners with the national education system to offer targeted training kits, e.g. seminar series for teachers.

Ireland's Financial Regulator, a distinct component of the Central Bank and Financial Services Authority of Ireland, provides secondary school and third-level student kits such as Get Smart with Your Money and Money Tips for Students. Moreover, the National Steering Group for Financial Education established by the Financial Regulator is an initiative on which several partners have joined efforts to support financial education. The Irish financial authorities intend to expand their financial literacy program further.

"iconomix" – The Swiss National Bank's New Economic Education Package

The Swiss National Bank provides brochures and films on money and central bank policymaking some of which are targeted especially at schools. Moreover, the central bank regularly receives groups of schoolchildren and other interested visitors for a lecture plus banknote exhibition viewing.

The Study Center Gerzensee is a foundation of the Swiss National Bank for the training of central bankers as well as doctoral students and faculty members at Swiss universities.

On the occasion of the 100th anniversary of its foundation, the Swiss National Bank materially expanded its economic education activities in 2007. It is going to present a package it calls "iconomix" for the general public on a dedicated website (www.iconomix.ch). The education products are developed in cooperation with external experts to meet educational, didactical, methodical and design standards and are limited not simply to descriptions of monetary policymaking, but convey broader economic knowledge, principles and approaches. Higher secondary (post-compulsory, predegree) school teachers and students are the primary target group, and the resources are intended to complement teaching. The education products are offered in a modular fashion and provide flexible-use material over the Internet ranging from downloadable worksheets to complete learning units with a number of variable lessons. Some learning units draw on innovative learning software such as simulations or online strategy games. Students also have the opportunity to submit economics papers to participate in competitions. The teaching material is complemented by teacher training activities. The basic iconomix package is scheduled to go online end-October 2007. The full program will be available by 2009, after which it will be updated and refined. A comprehensive evaluation of the iconomix program is scheduled for within the first two years.

Narodowy Bank Polski's Proactive Education Initiatives

Narodowy Bank Polski stands out among the central banks of the new EU Member States with its economic education and financial literacy initia-

tives. The central bank is highly committed to promoting economic education as a high priority of Polish education policy and has set itself an ambitious goal: The bank will consider its efforts a success if it manages to close young working people's economic knowledge gap between what they are taught at school and what they need for everyday life. In addition to providing comprehensive educational kits encompassing a broad range of diverse products for every perceivable target group (including TV broadcasts about economics topics), Narodowy Bank Polski stages national competitions, and it is working hard on implementing a proactive economic education policy.

Furthermore, the central bank fosters the discussion of financial literacy issues and the exchange of information on dedicated activities among central banks. A noteworthy recent contribution was the conference *The Role of Central Banks in Economic and Personal Finance Education*, which the central bank organized in September 2006 (Narodowy Bank Polski, 2006). Another innovative tool designed to promote the exchange of information about central banking economic literacy initiatives is a new online portal: Economic Education Resource Bank (www.eerb.nbpportal.pl). However, at the time of writing only a few central banks were presenting their initiatives via this forum.

At its "People & Money Centre for Education," Česká Národní Banka, provides some 80 target-group specific panels on economic topics offering information in films, lectures and exhibitions. Roughly 75,000 visitors a year seek out information from this service point of Česká Národní Banka. Moreover, the Czech central bank

opens its doors to the public once a year and hosts a research open day every year. A publicly accessible online library rounds off the financial education products of the central bank.

Magyar Nemzeti Bank has a very similar set of financial education instruments. The visitors center is at the heart of the Hungarian central bank's efforts; it is complemented by an online program and a library comprising some 80,000 publications.

Latvijas Banka also focuses its economic knowledge transfer efforts on its visitors center. The permanent exhibition *Money World* was prepared by seven staff members and a number of experts at a cost of EUR 1 million. This exhibition presents material on 15 themes and boasts 30 interactive presentations aimed primarily at secondary school students under the umbrella "Come, See, Touch, Find Out and Understand." All material is presented in Latvian, Russian and English.

Estonia's central bank, Eesti Pank, also has a money museum and offers what is entitled "Euroservice" information.

6.3 Non-European Central Banks – The Federal Reserve System Provides Exemplary Financial Literacy Products

The non-European central banks that provide the most comprehensive financial education products and services are those of Australia, Canada, Japan, New Zealand, Mexico, Singapore and South Korea. Moreover, some African central banks – those of South Africa, Kenya, Belize and Botswana – provide material on financial education (Narodowy Bank Polski, 2006). Finally, central banks in the Caribbean area – those of Costa

Rica, Bahamas, Trinidad and Tobago as well as the Eastern Caribbean Central Bank – provide financial education information.

The Comprehensive and Very Diverse Set of Financial Education Instruments of the Federal Reserve System

The central bank of the United States, the Federal Reserve System, is one of the top providers of economic education and, above all, financial literacy products. The set of financial education instruments is expanded almost daily. Hogarth (2007) points out that 675 different financial education initiatives and programs were being operated in the United States in early 2007, providing a ten-page list of the programs and activities of the individual Federal Reserve Banks (Bernanke, 2006). By dint of the Fair and Accurate Credit Transaction Act (FACT Act), the U.S. government established a central coordinator, the U.S. Financial Literacy and Education Commission, which numbers the Board of Governors of the Federal Reserve System among a total of 20 U.S. institutions represented in the Commission. The central contact point is the MyMoney.gov website, which displays an impressive array of topics, a multitude of instruments and nearly 220 publications by federal agencies or partner organizations. Finally, the Commission developed a national strategy for financial education in 2006 (Taking Ownership of the Future; Financial Literacy and Education Commission, 2006).

The Federal Reserve System's financial education information is clearly structured and very comprehensive: The websites of the Federal Reserve Board and of the 12 regional Reserve Banks cover a broad range of topics prepared by a total of 75 em-

ployees (Minehan, 2006) from all regional Reserve Banks. Consumer Information and Publications as well as Education Resources are separate items at the top menu level of the Federal Reserve Board's website at www.federalreserve.gov, impressive evidence of just how important the Federal Reserve System considers financial education.

The Federal Reserve System provides basic educational kits for primary and secondary schools and comprehensive information material on dealing with practical money matters for postsecondary education target groups. The latter material includes information about medium- and long-term economic trends, e.g. about fiscal developments. The Federal Reserve System also provides consumer protection information, in line with its statutory obligation and motivated by its understanding that a financially capable, well-informed consumer is a well-protected consumer. Moreover, the central bank is intent on making people aware of developments like demographic ageing and its implications for (individual) retirement provision. The Federal Reserve System has made a point of providing objective financial access information to immigrants seeking advice to cope with the challenges of housing and markets in the United States.

The Federal Reserve System's educational material is very strongly geared toward target groups, as is the material provided by individual regional Reserve Banks. The website www.federalreserveeducation.org provides an overview of the heterogeneous array of educational products and services of the Federal Reserve System. Internet users may click on menu items to access very detailed additional educational information

for practically every medium (e.g. print, multimedia, e-learning) and may access cooperation partners' websites at the many additional links provided.

In 2003, the Federal Reserve System launched a campaign entitled "There's a Lot to Learn about Money." Since then, it has enhanced its financial literacy campaign with a multitude of special programs and materials. Teaching and visitors centers at regional Reserve Banks, special products, programs and seminars for (school)children, students, teachers and the general public, and the comprehensive e-education portal form the core of the instructional tools and facilities. To get its financial literacy messages across, the Federal Reserve System avails itself of a large gamut of instruments: targeted forums, school weeks, newspaper cooperations, multimedia packages, contests (such as the Fed challenge, an academic competition in which school teams of students make a monetary policy recommendation for the Federal Open Market Committee on the basis of an analysis of the current state of the economy), roundtable discussions and newsletters (Hogarth, 2007; Narodowy Bank Polski, 2006).

Moreover, the benefit of U.S. economic education and especially financial literacy programs has been widely evaluated (Braunstein and Welch, 2003; Hogarth, 2007). The Federal Reserve System itself has also analyzed financial education activities, but no clear conclusion can be drawn from the research. What is clear is that knowing more about the economy – being financially literate – has benefits for people's daily lives –

and for society as a whole. The extent of the benefit is nearly impossible to determine or put into numbers, however.

Other Central Banks: Comprehensive Seminar Series of the Central Banks of South Korea and Singapore Stand Out

The Reserve Bank of Australia focuses its financial education efforts on teachers, students and researchers, offering educational products and services much like those of European central banks. The Bank of Canada and the Reserve Bank of New Zealand work along quite similar lines. On its part, the Bank of Japan is a very active member of the Central Council for Financial Services Information, which has stepped up its financial education campaign considerably since 2005. The Bank of Japan's efforts concentrate on the target groups schoolchildren, teachers and students.

Since 2004, the Bank of Korea has refocused its efforts especially on seminars, in addition to textbooks and education programs (Park, 2006). As part of the Bank of Korea's education center, it runs a three-stage economic education program for participants with a low level, an average level and an advanced level of economic knowledge. The Currency Finance Museum, which attracts a large number of visitors, and the Economic Camp for Youths program are also part of the Bank of Korea's educational tool set.¹²

A similar economic and financial literacy program is provided in Singapore. The so called MoneySENSE program is spearheaded by the Financial Education Steering Committee, comprising the Ministry of Commu-

¹² See also *The Korea Times* of August 7, 2007: "Summer Camp for Financial Literacy Gaining Popularity."

nity Development, Youth and Sports, Ministry of Education, Ministry of Manpower, Central Provident Fund Board, People's Association and the Monetary Authority of Singapore. It is a three-tier program. Tier I is dedicated to basic money management and financial skills, Tier II equips participants with long-term financial planning skills, and Tier III imparts investment know-how and skills. Under the national financial education program MoneySENSE, the Monetary Authority of Singapore has developed a TV education show entitled Talking Dollar and Sense.

*The Public Education and Awareness
Programmes of the Eastern Caribbean
Central Bank*

The Eastern Caribbean Central Bank's website (www.eccb-centralbank.org) lists a menu item entitled Public Education and Awareness Programmes that opens to present a truly impressive array of educational materials and tools. Under heading "Manage Your Money – Enhance Your Life," the central bank clearly states what it intends to achieve with its numerous education initiatives for specific target groups. The range of topics covered and products presented is very broad and includes competitions, videos, audio programs (e.g. Financial Tips), a number of radio programs (e.g. The Economy and You, Financial Stability Issues) and newspaper series (e.g. The EC Currency and the Eastern Caribbean Currency Union or Investment Insights) as well as a special Financial Literacy Month campaign (every October). Education and exhibition centers offering courses and seminars for various levels support the central bank's broad and diversified financial education activities.

7 Summary: Despite Many Promising Initiatives, There Is Still Room for Improvement

After taking stock of some 30 central banks' financial education programs, only some of which are described in more detail for a lack of access to related information, the following assessment of central banks' economic education and financial literacy initiatives can be made:

Consumers with a better understanding of economics and better financial skills can grasp economic issues more easily and will therefore be more understanding of monetary policymaking. Many central banks undertake economic and financial education activities for precisely this reason. Knowledge transfer happens at many levels – the related knowledge products are available for various skill levels, are broadly targeted and diversified, innovative and interesting. Central banks take a particular interest in preparing materials for teachers and schoolchildren. Little is available for primary school-age children, with the notable exception of material prepared by the Bank of England and the Federal Reserve System, but some central banks (e.g. de Nederlandsche Bank) have begun to provide special materials and tools for this target group. Large financial education campaigns are the exception and are run rarely, if at all. Some central banks have earmarked substantial resources to develop the currently available financial education tools and instruments. Many central banks appear set to expand their financial education programs further, as their efforts and plans to enhance related products and services indicate.

Only few central banks visibly display their commitment to financial

education as belonging among their responsibilities. Only the websites of the Bank of England, Narodowy Bank Polski and the Federal Reserve System clearly reflect the high priority attached to the educational mission. Most central banks fail to show their financial education activities as a separate task, subsuming them under another responsibility instead. Accordingly, it is difficult to identify the objectives of central banks' educational activities and their strategic cornerstones.

Central banks' educational material focuses largely on enhancing economic literacy in general and financial literacy (money management) in particular.

A trend reversal of product design is clearly underway. Brochures, folders, pamphlets and the like are increasingly being replaced by multimedia packages and online material. The latest technology has made it possible to present useful messages in a lively and appealing way. Moreover, an unmistakable trend to formulate content more clearly and to use more down-to-earth and less abstract language in drawing up education programs, seminars and lectures has established itself. Education, teaching, teaching methods and design are crucial to succeeding in communicating economic issues. They are even more important for material targeted at younger audiences and in view of the brief time slot for instruction at schools compared to other subjects. Consequently, economic education material for schools should be practical, drawn from life, appropriate in terms of content and of the target audience, helpful and in tune with users' interests. This should increase teachers' willingness to integrate such products into their teaching rou-

tine. Currently, some central banks' material is not quite up to this big challenge – the wording and content still come across as too technical, meaning abstract and theoretical. As the experience some central banks have gained shows, intense cooperation with external experts for product design and product communication has proved very useful. Jürgen Stark, member of the Executive Board of the ECB, summarizes this insight as follows: “The basis for our success in the field of economic and financial education is cooperation with various professional educators, teachers and public groups which have a significant impact on the general public's opinions and level of knowledge.” (Stark, 2006). Some central banks have already implemented the new communication principles very successfully, whereas others have yet to do so.

Broadly speaking, central banks can choose from among three different media in their public relations work: they can opt for traditional print products, visitors or education centers (frequently money museums), and e-education modules. E-education is provided either on the central bank's own website, via separate websites (as in the case of money museums), or via separate online platforms. As attendance figures confirm, education or knowledge centers, which concentrate central banks' educational material (and exhibitions as well as lectures), have become especially popular. A few central banks put education products and services online nearly as soon as these are completed and present every product and service within a well-structured framework. The Federal Reserve System and the Eastern Caribbean Central Bank stand out as exemplary.

However, at most central banks, on-line information about educational activities is split up among various lower-level menu items, making it quite difficult to find. Therefore, many central banks would be well advised to improve the structure of their educational material and tools and to present the material more coherently online.

Theme-related Internet portals appear to be an especially promising approach to presentation. Here, central banks can establish a common web presence with their cooperation partners. Central banks can set up such networks among themselves, too – the Federal Reserve System's network may serve as a shining example. Narodowy Bank Polski's initiative – a worldwide Internet portal for central banks – is trendsetting as well. The cooperation between central

banks is to be intensified. This creates synergies, saves costs and could help optimize education products.

Virtually no analyses about how effective financial education measures are – apart from those for the United States – have become available, at least not publicly. With investment in central banks' education programs already high and set to rise further, such analyses should definitely be made part of the overall education concept. Some central banks have already done so – the Swiss National Bank, for instance, has scheduled an evaluation of the program introduced in 2007 for within the first two years of its operation. The Oesterreichische Nationalbank has also made regular monitoring an integral part of its campaign to strengthen financial competence and economic literacy in Austria.

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