OESTERREICHISCHE NATIONALBANK
EUROSYSTEM

37. VOLKSWIRTSCHAFTLICHE TAGUNG 2009
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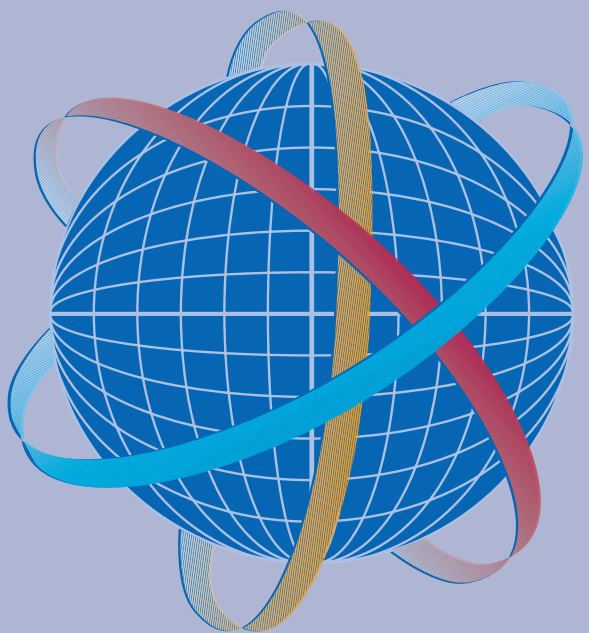
Wendepunkt Krise:
Wirtschaftspolitik unter neuen Vorzeichen

Beyond the Crisis:
Economic Policy in a New Macroeconomic Environment



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Tagungseröffnung

Sehr geehrter Herr Bundeskanzler,
sehr geehrte Damen und Herren!
Ich begrüße Sie zur 37. Volkswirtschaftlichen Tagung der Oesterreichischen Nationalbank und heiße Sie alle hier in Wien sehr herzlich willkommen.

Eine besondere Auszeichnung für die Oesterreichische Nationalbank ist es, dass Herr Bundeskanzler *Werner Faymann* trotz seiner zahlreichen anderweitigen Verpflichtungen Zeit gefunden hat, sich zum Beginn unserer Konferenz an die Teilnehmer der diesjährigen Volkswirtschaftlichen Tagung zu wenden.

Es ist mir zudem eine besondere Freude, unsere Vortragenden des heutigen Vormittags, Herrn *Arnout Wellink*, Präsident der Nederlandsche Bank und Vorsitzender des Basler Ausschusses für Bankenaufsicht und Herrn *Lucas Papademos*, Vizepräsident der Europäischen Zentralbank begrüßen zu können. Vielen Dank, dass Sie nach Wien gekommen sind und ein herzliches Willkommen.

Ich freue mich über die große Zahl an Teilnehmern. Der Meinungsaustausch mit Ihnen und mit den vielen namhaften internationalen und österreichischen Experten, die wir für diese Tagung gewinnen konnten, ist mir gerade in diesem Jahr besonders wichtig. Wir haben als Tagungsthema den Titel *Wendepunkt Krise: Wirtschaftspolitik unter neuen Vorzeichen* gewählt. Es ist klar, dass das Thema Krise momentan im Zentrum des öffentlichen Interesses steht. In dieser Tagung wollen wir aber vor allem diskutieren, was die mittel- und langfristigen Perspektiven sind, die sich aus dieser Krise für die Zukunft der Wirtschaftspolitik ergeben.

Ich möchte mich auch gleich im Voraus bei allen Vortragenden und bei den Teilnehmern der Podiumsdiskussionen sowie bei unseren Mitarbeitern für ihre hervorragende Vorbereitungsarbeit sehr herzlich bedanken.

Sehr geehrte Damen und Herren!
Wir befinden uns derzeit in einer speziellen Konstellation: Zum einen liegen für dieses Jahr Wachstumsprognosen vor, die tatsächlich krisenhaft und sehr ernst zu nehmen sind: –4 % für den Euroraum, bis –6 % für Deutschland für 2009. Zum anderen gibt es inzwischen doch vermehrt Hinweise auf eine gewisse Stabilisierung speziell im Finanzsektor. So ist im April der Index für europäische Kreditderivate (iTraxx) als Risikomaß um 19 % gegenüber dem Vormonat gesunken, der US-Wert um 16 % – auch die Werte für die Republik Österreich haben sich deutlich verbessert. Das Emissionsvolumen für Unternehmensanleihen in Europa war in den ersten vier Monaten rund viermal so hoch wie in der Vergleichsperiode des Vorjahrs und es gibt weitere positive Hinweise, z. B. bei den Auftragseingängen. Bei der Frühjahrstagung des Internationalen Währungsfonds war das häufigste Schlagwort „green shoots" – die grünen Sprossen der Erholung, auf die man hofft. Bei der BIZ-Tagung dieser Woche wurde sogar in Bezug auf China von einem *Wald grüner Sprossen* gesprochen.

Die aktuelle globale ökonomische Lage, gekennzeichnet von weltweiten Problemen im Bankensektor und einer starken weltweiten realwirtschaftlichen Kontraktion, stellt die Wirtschaftspolitik derzeit vor große Herausforderungen. Die erste Herausforderung liegt sicherlich im Ausmaß der aktuellen Finanzkrise. Eine andere Herausforderung ist die Gestaltung einer effektiven wirtschaftspolitischen Antwort auf die Krise.

Was das Ausmaß betrifft herrscht heute – im Gegensatz etwa zur Krise der 1930er-Jahre – bei Wirtschaftspolitikern und Ökonomen ein weitgehender Konsens, dass eine Situation, in der sich Probleme des Finanzsektors

mit einer realwirtschaftlichen Kontraktion wechselseitig verstärken, eine strategisch koordinierte makroökonomische Politik erfordert. Dabei geht es darum die aggregierte Nachfrage zu erhöhen, die Bankbilanzen zu stärken und die Funktionalität des Kreditapparats sicher zu stellen. Um der krisenbedingten ökonomischen Kontraktion entgegenzusteuern bedarf es also einer richtig gewählten Kombination expansiver geldpolitischer und fiskalischer Maßnahmen. Den Notenbanken, kommt in diesem Zusammenspiel eine wirtschaftspolitische Schlüsselstellung zu.

Das letzte Jahr, insbesondere die Zeit nach der Insolvenz von Lehman Brothers im September 2008, war von zahlreichen unkonventionellen geldpolitischen Maßnahmen geprägt. Einige traditionelle und neue Instrumente zur Liquiditätsbereitstellung für das Bankensystem wurden zum Einsatz gebracht. Das Ausmaß der Maßnahmen sorgte für Schlagzeilen. Es ist vor diesem Hintergrund nützlich, sich zunächst auf die Grundlagen der Geldpolitik zu besinnen.

Moderne Notenbanken, sind wirtschaftspolitische Institutionen mit dem klar definierten, prioritären Ziel der Preisstabilität. Im Eurosystem ist dieses Ziel dahingehend konkretisiert, dass Preisstabilität als ein mittelfristiger Anstieg des Harmonisierten Verbraucherpreisindex (HVPI) von unter aber nahe 2% für den Euroraum angestrebt wird. Moderne Notenbanken haben in ihrem Verhältnis zur Politik ein hohes Maß an Unabhängigkeit, das sie unterstützt, dieses Ziel zu erreichen. Ihr hauptsächliches Politikinstrument ist der Leitzins, die Bedingung zu welchen Konditionen Kreditinstitute bei der Notenbank Geld leihen können.

Darüber hinaus tragen Notenbanken die Verantwortung für die Stabilität des Finanzsystems. Dieser Verantwortung können sie vor allem durch die Bereitstellung von Liquidität an das Bankensystem gerecht werden. Beide Instrumente können in einer Krise eingesetzt werden.

Diese traditionellen geldpolitischen Instrumente wurden in der aktuellen Krise auch zum Einsatz gebracht. Seit Oktober des letzten Jahres wurde der Leitzins der EZB um 325 Basispunkte reduziert. Auch das Instrument der Liquiditätsbereitstellung für das Bankensystem wurde in hohem Maße eingesetzt und auch durch Maßnahmen ergänzt, die in normalen Zeiten nicht notwendig sind, wie die Bereitstellung von Liquidität mit Fristigkeiten bis zu einem Jahr, oder die Bereitstellung von Liquidität in Fremdwährung (z. B. US-Dollar und Schweizer Franken) in Form von Swaps mit dem Federal Reserve System und anderen Zentralbanken.

Beide Maßnahmen, die Zinspolitik und die Liquiditätsversorgung des Bankensystems, helfen die angespannte Situation im Kreditapparat zu verbessern und kommen der Aufgabe der Verantwortung für die Stabilität des Finanzsystems nach. Es ist aber auch wichtig, zu betonen, dass beide Maßnahmen mit dem Preisstabilitätsziel der EZB vereinbar sind, da sowohl der Inflationsdruck als auch die Inflationsrisiken in der Krise stark zurückgegangen sind. Die Befürchtungen einer bevorstehenden inflationären Entwicklung aufgrund der aktuellen geldpolitischen Maßnahmen sind daher unbegründet. Sowohl die kurzfristigen Inflationserwartungen, die prognostizierten realwirtschaftlichen Kapazitätsauslastungen (Outputlücke), als auch das Kreditwachstum und das Wachstum der Geldmenge zeigen derzeit keine Inflationsrisiken an. Natürlich sind diese Entwicklungen unter Beobachtung zu halten, um allenfalls rasch zu reagieren.

Unsere unmittelbare Perspektive ist, dass nun als Reaktion auf die hohen Energiepreise im Vorjahr, in einzelnen Staaten des Euroraums, ein sinkendes Preisniveau auftreten könnte. Der Index der Erzeugerpreise ist im Euroraum zuletzt (März) um 3,1 % gegenüber dem Vorjahr gefallen. Ich möchte aber jedenfalls betonen, dass ich mittelfristig weder ein Deflations- noch ein Inflationsrisiko sehe.

In einer Krisensituation kann es vorkommen, dass die traditionellen geldpolitischen Instrumente nicht ausreichen oder an Schärfe verlieren. Das trifft insbesondere auf das Instrument des Leitzinses zu, der sich der unteren Schranke von Null annähern kann. In einer solchen Situation hat die Notenbank noch andere geldpolitische Möglichkeiten.

Sie kann die Geldmenge temporär ausweiten, um mit diesem zusätzlichen Geld Vermögenstitel wie Staatsanleihen aber auch Unternehmensanleihen, Papiere von anderen Banken oder andere Vermögenswerte aufzukaufen. Der EZB-Rat hat zum Beispiel in seiner Sitzung am 7. Mai 2009 die Voraussetzungen geschaffen, dass das Eurosystem im Eurogebiet emittierte und in Euro denominierte Pfandbriefe erwerben, und die Europäische Investitionsbank sich an den geldpolitischen Operationen des Eurosystems beteiligen kann.

Obwohl Notenbanken eine Schlüsselposition in der wirtschaftspolitischen Antwort auf die gegenwärtige Krise einnehmen, sind sie nur ein Teil einer gesamten makroökonomischen Strategie, in der auch einer expansiven Fiskalpolitik eine besondere Bedeutung zukommt. Es ist wichtig, dass in einer Situation, in der alle Komponenten der aggregierten Nachfrage, Konsum, Investitionen und Exporte zurückgehen, der öffentliche Sektor die realwirtschaftliche Kontraktion nicht zusätzlich durch eine restriktive Fiskalpolitik verschärft, sondern ihr entgegensteuert. Ebenso wichtig ist es, eine Exitstrategie aus dieser expansiven Fiskalpolitik zu vereinbaren, welche auf einen klar formulierten Budgetkonsolidierungspfad

zurückführt, sobald sich die Wirtschaft nachhaltig zu erholen beginnt. Darüber herrscht unter Ökonomen weitestgehend Konsens – und, wie ich meine, auch in der österreichischen Politik.

Sehr geehrte Damen und Herren!
Ich habe Ihnen kurz dargelegt, dass den Notenbanken eine Schlüsselstellung bei der Wirtschaftspolitik in der gegenwärtigen Krise zukommt. Sie hat eine ganze Reihe von Instrumenten zur Verfügung, welche sie – konform mit ihrem Ziel Preisstabilität zu gewährleisten – zum Einsatz bringen kann. Ich habe mich in meinen bisherigen Ausführungen auf die Politik von Notenbanken im Allgemeinen und EZB im Besonderen bezogen.

Lassen Sie mich die Gelegenheit nutzen darauf hinzuweisen, dass die OeNB als nationale Notenbank in diesem Zusammenhang eine besondere Rolle spielt und viele Aufgaben wahrnimmt, die sowohl in der Umsetzung der Geldpolitik des Eurosystems, als auch im heimischen Krisenmanagement überaus wichtig ist.

Alle Ressorts der OeNB sind in diese Aktivitäten direkt oder indirekt eingebunden. Die OeNB ist für die operative Umsetzung der geldpolitischen Maßnahmen des Eurosystems in Österreich und für Liquiditätsbeistand in Notfällen verantwortlich. Sie stellt als Expertenorganisation in umfangreichem Maße Know-how, Analysen und hochqualitative Daten für die EZB und für ihre Partnerorganisationen in Österreich zur Verfügung. Darüber hinaus ist die OeNB auch über die Bankenaufsicht unmittelbar in die Sicherung der Finanzmarktstabilität eingebunden.

Die Expertise und die Handlungsfähigkeit von Notenbanken – der EZB und der nationalen Notenbanken des Eurosystems – sind für das reibungslose Funktionieren des Geldwesens und des Finanzsystems von zentraler Bedeutung. In einer Krisensituation, wie wir sie gegenwärtig erleben, wird diese Bedeutung noch verstärkt.

Die Instrumente der Notenbanken sind umso wirksamer je besser sie in eine makroökonomische Gesamtstrategie eingebettet sind, in der auch die Fiskalpolitik eine bedeutende Rolle spielt. Die konkrete Umsetzung dieser Instrumente in wirtschafts- und geldpolitische Maßnahmen bedarf auch starker und handlungsfähiger nationaler geldpolitischer Institutionen, wie der OeNB. Die Kapazität und die Expertise dieser Institution sind gerade jetzt besonders wichtig und bedeuten für uns auch eine ganz besondere Verantwortung.

Sehr geehrte Damen und Herren!
Ein guter Notenbanker muss eine Mischung aus Feuerwehrmann und Polizist sein: Wir sind jetzt – und ich denke erfolgreich – mit der Eindämmung eines schweren Brandes der Weltwirtschaft befasst. Sie können sich aber darauf verlassen, dass wir gleichzeitig für den geordneten Ablauf des Normalbetriebs sorgen, dass heißt für Ordnung des Geld- und Kreditwesens und für nachhaltiges Wirtschaftswachstum bei Preisstabilität.

Ich freue mich, dass wir in den nächsten beiden Tagen Zeit und Gelegenheit haben Wirtschaftspolitik in diesem anspruchsvollen Umfeld unter zahlreichen Aspekten zu beleuchten und zu diskutieren. Ich wünsche Ihnen allen eine interessante und erfolgreiche volkswirtschaftliche Tagung.

Tagungsblock 1:
Wendpunkt Krise: Was sind die Folgen für die Wirtschaftspolitik?

Session 1:
Beyond the Crisis: What Are the Consequences for the Economic Policy Agenda?

Werner Faymann

Bundeskanzler der Republik Österreich

Vertrauen schaffen in schwierigen Zeiten

In diesem Kreis von Experten die Bedeutung von Notenbanken zu erklären, wäre wahrscheinlich nicht adäquat. Ich möchte mich aber dafür bedanken, dass es in sehr schwierigen wirtschaftlichen Zeiten Institutionen gibt, auf die man sich verlassen kann und die Vertrauen schaffen – Vertrauen auf allen Ebenen. Vertrauen bei Konsumenten, Vertrauen in der Wirtschaft, Vertrauen zwischen den Banken – und um dieses Vertrauen zu schaffen, ist auch eine enge und gute Zusammenarbeit von Institutionen, zu denen die Bevölkerung und die Wirtschaft Vertrauen gewonnen hat wichtig. Daher ist eine Institution wie die Oesterreichische Nationalbank (OeNB) für die Regierung gerade in dieser Phase in der Bedeutung nicht zu unterschätzen und für die gute Zusammenarbeit mit der OeNB möchte ich mich hiermit bedanken.

Ich möchte zwei Aspekte besonders in den Vordergrund stellen, die Sie wahrscheinlich bei einem österreichischen Bundeskanzler nicht überraschen werden. Erstens den sozialen Aspekt, und zweitens die Konsequenzen, die die Politik aus der gegenwärtigen Krise zieht und ziehen muss.

Man kann sich natürlich fragen, warum ein Bundeskanzler zu Notenbank- und Finanzexperten über soziale Aspekte spricht. Ich tue das, weil ich denke, dass der soziale Frieden und der soziale Ausgleich in Europa, aber auch in unserem Land, ein Wert ist, den man gar nicht hoch genug schätzen kann. Besonders im Zusammenhang mit der wirtschaftlichen Krise ist es wichtig, dies zu betonen, da viele Menschen, die durch die Wirtschaftskrise verunsichert sind, Orientierung suchen.

Fragen wie: „Wer hat die Krise verursacht? Warum wendet die Regierung so viel Geld zur Rettung der Banken auf? Warum helft Ihr nicht in erster Linie den Armen und verhindert Arbeitslosigkeit? Warum bezahlen viele für die Krise, die nie etwas mit Spekulation zu tun hatten?“ sind Fragen, die einem in der Bevölkerung von allen Bevölkerungsschichten, gleich welchen Ausbildungsstands, gleich welcher Berufsgruppe, gleich in welchem Bundesland, in diesen Tagen am häufigsten gestellt werden. Und manche leiten aus diesen Ängsten und Sorgen auch falsche Antworten ab. Es gibt Gruppen, die versuchen, diese Unsicherheit dahingehend zu nutzen, dass sie vereinfachende Antworten geben und sagen: „Schuld sind die Ausländer. Schuld sind ein paar Reiche. Schuld ist irgendjemand.“

In komplexen wirtschaftlichen Systemen, und in einer Volkswirtschaft wie der österreichischen, die so stark exportorientiert ist, dass sie in der Vergangenheit teils höhere Exportzuwächse aufzuweisen hatte als der Exportweltmeister Deutschland, sind die wirtschaftlichen Zusammenhänge zu erläutern und zu erklären. Daher ist es entscheidend, dass wir auch in diesen Zeiten für Vertrauen und Stabilität werben und den sozialen Frieden und den sozialen Ausgleich besonders in den Mittelpunkt stellen.

In den 1930er-Jahren, genauer im Jahr 1933, gab es in Österreich 557.000 Arbeitslose. Das entsprach einer Arbeitslosenquote von 26 %. Heute haben wir eine Arbeitslosenquote von 4,5 % – und das sind noch immer um 4,5 % zu viel. Die Arbeitslosenquote in Österreich liegt damit fast bei der Hälfte des Durchschnitts der EU-27 – und gleichzeitig wissen wir, dass der Anstieg der Arbeitslosigkeit noch nicht vorbei ist. Daher wäre es falsch, den Menschen entgegen allen Wirtschaftsprognosen, die wir heute kennen, zu versprechen, dass die Krise in Österreich bereits überwunden sei.

In Europa leben 80 Millionen armutsgefährdete Menschen. Es gibt Wirtschaftsprognosen, wonach sich diese Zahl in den nächsten Monaten um etwa 50 % erhöhen wird. Privatkonkurse werden uns in den kommenden Monaten genauso beschäftigen wie der Anstieg der Arbeitslosigkeit. Junge Menschen, die von der Schule kommen und keine Arbeit finden, und die Frage, ob man einen Ausbildungsplatz erhält, verlangen nach Antworten.

Die erste große sozialwissenschaftliche Untersuchung von Marie Jahoda, Felix Lazarsfeld und Hans Zeisel in den 1930er-Jahren am Beispiel einer Arbeitersiedlung im heutigen Grammatneusiedel, dem damaligen Marienthal zeigt, sowie auch viele aktuelle Studien, dass wir die soziale Sprengkraft von Arbeitslosigkeit nicht unterschätzen dürfen. Mit dem Verlust des Arbeitsplatzes ist nicht nur ein Einkommensverlust verbunden, sondern oft auch soziale Ausgrenzung, Hoffnungslosigkeit, und Depression. Daher ist dem Kampf gegen die Arbeitslosigkeit in dieser kritischen Phase auch unbestritten Vorrang einzuräumen – bis die Rahmenbedingungen in der Wirtschaft wieder so sind, dass der Arbeitsmarkt wieder funktioniert, d. h. ohne große Konjunkturpakete, ohne besondere Maßnahmen etwa im Bereich der Kurzarbeit, der Ausbildungsgarantie, oder durch den Einsatz hoher Steuermittel wieder zu funktionieren. Wir können in unseren Volkswirtschaften auch nicht auf Dauer die Konjunkturpakete, die wir geschnürt, geschaffen und in Österreich auch umgesetzt haben, endlos wiederholen.

Wir setzen in diesem Jahr 6 Mrd EUR ein, die Hälfte davon in der Tarifsenkung bei der Einkommensteuer, die andere Hälfte durch Umsetzung einzelner Maßnahmen, wie etwa Kreditgarantien durch die Austria Wirtschaft Service (AWS), die der Mittelständischen Wirtschaft und den Klein- und Mittelbetrieben nützen. Infrastrukturprojekte wie der Bau von Straße und Schiene, die Sanierung und der Neubau von öffentlichen Gebäuden oder die thermische Sanierung tragen ebenso zur Stützung der Konjunktur und zur Schaffung von Arbeitsplätzen bei. Investitionen in Bildung und Forschung sind nicht nur sinnvoll als Krisenmaßnahme, sondern verbessern auch langfristig die Ausgangsposition für nachhaltiges Wirtschaftswachstum und damit die Wettbewerbsposition unseres Landes. Wer jetzt hochqualifizierte Arbeitnehmer mithilfe von Kurzarbeitszeitmodellen nicht kündigt, auch wenn man ihre Kapazität nicht zur Gänze braucht, ist auch für den Zeitpunkt des Wirtschaftsaufschwungs besser gerüstet.

Die Frage, wie viele Konjunkturprogramme sich Europa und die einzelnen Nationalstaaten eigentlich leisten können, ohne dabei Verschuldungsgrenzen zu überschreiten, die den budgetären Handlungsspielraum der Regierungen über Gebühr einschränken, ist berechtigt. Ich denke aber, dass es vorrangig ist, die Krise – nicht nur zur Vermeidung von persönlichem Leid, sondern aus rein volkswirtschaftlichen Überlegungen – so kurz wie möglich zu halten und gegenzusteuern – auch, wenn wir damit kurzfristig höhere Defizite in Kauf nehmen müssen. Gegenzusteuern heißt aber, 6 Mrd EUR in Österreich im heutigen Jahr einzusetzen, ca. 8 Milliarden gemeinsam mit den Bundesländern und Institutionen, die in Österreich tätig sind, um zumindest eine Wirkung von 40.000–50.000 zusätzlichen Arbeitsplätzen zu schaffen, was bei 250.000 arbeitslosen Menschen das Problem auch nicht gänzlich beseitigt, aber doch den Beweis der Handlungsfähigkeit der Politik erbringt und

damit Vertrauen in der Bevölkerung und bei den Betroffenen schaffen soll.

Ich denke, dass die Bundesregierung in enger Abstimmung mit Wirtschaftsforschung und OeNB, mit ihren Maßnahmen und dem Bankenpaket durch Haftungen und Partizipationskapital ein Sicherheitsnetz geschaffen hat, das eine gewisse Stabilisierung der Lage ermöglicht hat.

Diese sozialpolitische Aufgabe, die damit verbunden ist, liegt darin, sich gerade in schwierigen Zeiten zu unseren hohen sozialen Standards zu bekennen, auf die wir stolz sind. Diese Standards dürfen in kritischen Zeiten nicht über Bord geworfen werden, da sie eine Art Garantie für soziale Stabilität darstellen. Sichere Pensionen, sichere leistbare Ausbildung für Kinder, gleich ob die Familie sich Schulgeld leisten könnte oder nicht, und andere soziale Errungenschaften müssen gerade in Zeiten der Krise erhalten bleiben, weil sie einerseits der wirtschaftlichen Entwicklung gegensteuern, und andererseits Vertrauen schaffen, sowie Konflikte und Gegensätze mildern. Denn was Europa derzeit am wenigsten brauchen kann, sind soziale Auseinandersetzungen, die auf der Straße durch Streiks ausgetragen werden oder durch Ausgrenzungen auf der anderen Seite. Europa braucht diesen sozialen Ausgleich als absolute Wertvorstellung.

Österreich hat viele Jahrzehnte von Sozialpartnerschaft, sozialem Ausgleich, dem Ausgleichen von gegensätzlichen Standpunkten sehr stark auch als Wirtschaftsstandort, einfach als lebenswerte Gesellschaft, aber auch als berechenbarer, positiver Faktor für einen Wirtschaftsstandort profitiert. Daher ist diese soziale Stabilität eines der wichtigsten Ziele, die es in den nächsten Monaten zu erhalten, bzw. zu erreichen gilt.

Der zweite Bereich, den ich ansprechen möchte, ist die Frage, welche Konsequenzen wir aus dieser Krise ziehen. Die Stabilität von Finanzmärkten und die Stabilität in Zentral- und Osteuropa – einer Region, für die Österreich immer eine wichtige Drehscheiben-Funktion wahrgenommen hat, auf die wir noch vor ein paar Monaten besonders stolz waren, ist hier von besonderer Bedeutung. Stabilität auf den Finanzmärkten und das Gewähren von Krediten, sowie ein grundsätzliches Vertrauen in die Stabilität des Finanzsystems, sind natürlich wichtige Voraussetzungen für eine Erholung am Arbeitsmarkt und zur Verhinderung von Arbeitslosigkeit. Die Konjunkturpakete der österreichischen Bundesregierung entfalten nur dann ihre volle Wirkung, wenn gleichzeitig die Finanzierung von Unternehmen und Haushalten sichergestellt ist. Ebenso ist es auch von zentraler Bedeutung, dass sich die Wirtschaftsverhältnisse in jenen zental- und osteuropäischen Ländern

stabilisieren, mit denen Österreich in intensiven Handelsbeziehungen steht und zu denen es besondere Beziehungen gibt.

Hier haben die Notenbanken, wie auch die Europäische Union und ihre Einrichtungen wie die EIB oder die EBRD, gemeinsam mit dem Internatio-

nalen Währungsfonds viel geleistet. Einerseits ist es wichtig sich zu dieser Stabilität zu bekennen und wichtige Partnerländer nicht alleine zu lassen, sondern zu wissen, dass Probleme auf den Finanzmärkten grenzüberschreitend ansteckend wirken können, andererseits ist es genauso unsere Aufgabe,

darauf hinzuweisen, dass die soziale Situation jedes einzelnen Arbeitssuchenden, eng mit der Frage der Stabilität im breiteren wirtschaftlichen Kontext verbunden ist.

Obwohl es viele Demagogen gibt, die diesen komplexen Fragestellungen mit einfachen Antworten begegnen, ist es weder unsere Aufgabe, zu verunsichern, noch, die Realität zu leugnen. Wir müssen hingegen Optimismus, Mut, Zuversicht und Vertrauen schaffen.

Welche Konsequenzen werden nun von Politik, Wirtschaft und den verantwortlichen Institutionen weltweit aus der Krise gezogen? Was tut die Europäische Union, um weitere Krisen in Zukunft zu verhindern? Oder ist der erste Tag nach der Krise bereits die Vorbereitung der nächsten Krise?

In der Europäischen Union hat sich bereits ein Konsens zu strengerer Finanzmarktkontrolle und -aufsicht gefunden. So wurden in der EU z. B. bereits strengere Regeln für die Zulassung von Rating-Agenturen beschlossen. Aber wir werden darüber hinaus auch noch andere Finanzmarktregulierungsmaßnahmen setzen müssen, die noch deutlicher sind, und die etwa das Problem von destabilisierender Spekulation ansprechen – und zwar nicht nur bei Finanzprodukten, sondern auch beim Handel mit Nahrungsmitteln, Wasser oder Energie – alles Elemente, die zur Grundversorgung gehören. Spekulation kann man nicht einfach per Resolution verbieten, aber die Frage, welche Maßnahmen man setzen kann, um sie an der Wurzel zu bekämpfen, werden wir zu beantworten haben.

Altkanzler Helmut Schmidt hat gesagt, man kann mit dem Appell an das Wissen allein die Finanzwirtschaft nicht in Ordnung bringen. Man muss sie regeln. Viele andere haben gesagt, man soll alles, was wie eine Bank aussieht, oder wie eine Bank arbeitet, auch wie eine Bank regulieren. Paul Krugman hat hier klare Worte gesprochen. Viele andere, die noch vor zwei oder drei Jahren schrankenlose Liberalisierung im Bereich der Finanzmärkte gefordert haben und so genannte Selbstregulierungskräfte beschworen haben, sehen heute die Notwendigkeit international koordinierter Finanzmarktregulierung mit einem Mindestmaß an Transparenz und einem Handeln mit moralischer Verantwortung.

Die europäische Bevölkerung wird die Politik dahingehend sehr genau beobachten, ob wir in der Europäischen Union aus der Krise gelernt haben, indem wir Konsequenzen dort ziehen, wo Regulierungen und Kontrollen, und in manchen Bereichen auch Verbote gewisser spekulativer Geschäfte

notwendig sind. Das ist nicht einfach, aber zu dieser politischen Zielsetzung müssen wir uns bekennen, wenn wir gegenüber der europäischen Öffentlichkeit glaubwürdig bleiben wollen.

Es wären noch viele Themen anzusprechen, die ich aber aus Zeitgründen auf einen Punkt zusammenfassen möchte, mit dem ich auch begonnen habe. Es ist die Frage des Vertrauens, die wir gemeinsam, Politik – Finanzexperten, Banken, Notenbanken, Wissenschafter – herzustellen haben. In schwierigen Zeiten genauso wie in guten Zeiten. Denn Vertrauen ist ein Gefühl, das viele Unternehmer dabei leitet, ob sie investieren sollen oder nicht. Vertrauen ist ein Gefühl, das den Konsument dazu veranlasst, sein Haus oder seine Wohnung zu renovieren oder es aber bleiben zu lassen, weil ihm das Krisengerede den Mut nimmt. Vertrauen ist etwas, das zwischen den Banken bestehen muss und Vertrauen ist etwas, das man auch in einer Regierung braucht. Daher sind die gute Zusammenarbeit in der Regierung und die Zusammenarbeit von verschiedensten Institutionen in diesen Zeiten wichtiger denn je. Wir brauchen Vertrauen und das entsteht durch Mut, auszusprechen, was notwendig ist.

Der Nobelpreisträger Hermann Scheer hat in einem Vortrag, den er vor Kurzem in Wien gehalten hat, ein wunderbares Zitat verwendet, das ich Ihnen nicht vorenthalten möchte. Er hat gesagt: *„Mut ist eine erneuerbare Energie“* – und davon werden wir gerade in diesen Zeiten sehr viel brauchen!

Alles Gute für Ihre Tagung!

Arnout H. E. M. Wellink

President De Nederlandsche Bank
Chairman Basel Committee on Banking Supervision

A New Structure for European and Global Financial Supervision

Introduction

1. Reporters repeatedly ask me about my thoughts on the economic downturn. How protracted will the economic recession be? Will there be prolonged deflation? These are valid questions – questions we have all been asking ourselves over the past months. Fundamental questions about what we learn from this crisis are less frequently asked, yet these are exactly the questions we should be asking ourselves now. The organisers of this long-standing, excellent economics conference understand that all too well. Today and tomorrow, we will go beyond the crisis and look at the economic policy agenda for the years to come. This morning, I present my views on the appropriate structure of European and global financial supervision. I restrict myself to the *institutional lessons* to be learned and the *institutional challenges* to be tackled.

The European Perspective

2. Starting from a European perspective, for some time now there has been widespread agreement that the existing institutional set-up in Europe is unsustainable. The ongoing crisis has strengthened this view considerably. While large European financial institutions are cross-border in nature, the supervisory system in Europe clearly is not. Financial supervision remains the remit of national Member States. Differences in financial supervisors' national mandates threaten the level playing field in Europe. And because financial supervisors operate under strictly national incentives, information-sharing and cooperation between them has not been sufficient. Up to now, macro-prudential supervision, which is aimed at limiting the frequency and severity of financial distress, has not only been too weak in Europe, but also too decentralised. This stands in contrast with other policy areas, in particular monetary policy, where decision-making is centralised and based on a much stricter analytical footing. Finally, most European central banks have published macro-prudential risk warnings. These have been ineffective, however, as has been painfully revealed by the crisis. We have learned that such warnings are not effective unless they are translated into action and that we need to pay more attention to system-wide risks.
3. In light of these and other lessons, a high-level group chaired by Jacques de Larosière recently made specific proposals on the structure for financial supervision in Europe. According to the De Larosière group, a European Systemic Risk Council should be set up to strengthen macro-prudential supervision. Likewise, the group recommends establishing a European System of Financial Supervisors to strengthen micro-prudential supervision. I would like to express my support for a quantum leap with respect to financial supervision in Europe, taking the De Larosière report as the starting point.

Recommendation: Europan Systemic Risk Council

4. Let me begin with their proposal for a European Systemic Risk Council (ESRC), a body that would be in charge of performing macro-prudential supervision, issuing risk warnings and giving recommendations on policy measures. While the

idea of such a Risk Council is broadly welcomed, it also has encountered criticism. There have been comments on the Council's suggested mandate as well as on its institutional design.

5. Regarding the suggested mandate, there is the notion that the Council should refrain from giving binding macro-prudential policy recommendations. While the key pillars of macro-prudential supervision are regulation, financial supervision, and monetary and fiscal policy, the Risk Council itself has no responsibility for these tasks, nor any decision-making powers. However, what the Risk Council can and actually should realise is better macro-prudential analysis at the European Level. It should communicate its findings to the competent bodies and monitor the follow up by the relevant authorities. Let me now be a bit more specific.
6. First, we have to come up with a clear definition of macro-prudential analysis. Only when we have agreed on the definition of macro-prudential analysis can we determine the scope of the Risk Council's mandate. Ideally, the Council's mandate would be broad. After all, the areas determining system-wide risk are widespread. To be effective, macro-prudential analysis should not be limited to current risks but also examine the systemic impact of general developments in financial innovation, financial regulation and market design.
7. Moreover, the Risk Council should be able to identify how risks are distributed in the financial system, evolve over time and can be amplified within the financial system and by interactions between the financial system and the real economy. The Risk Council should therefore have access to the necessary information, although there are constraints to information-sharing. For instance, sharing firm-specific data could prove problematic. Unfortunately, exactly this type of information is essential to macro-prudential supervisors. Firm-specific data allows for better analysis of the magnitude and distribution of key risks and also provides insight into the inter-linkages between different financial institutions. So, in the interest of macro-prudential analysis, we have to find a workable solution to firm-specific data sharing at the European level.
8. Crucial in the whole process is the translation of the macro-prudential risk analysis into Risk Council conclusions. Contrary to what the De Larosière group proposes, these conclusions cannot – for reasons of governance – be binding. For the Council conclusions to be effective, it is important that these are clear, concise and directed to the relevant authorities, such as individual supervisors and Member States but also European bodies like the Council of Ministers and the future European System of Financial Supervision. Needless to say that the Risk Council should monitor and evaluate the follow up given to the Risk Council's conclusions. The Risk Council should be entitled to give its opinion on the measures taken, if necessary on a confidential basis.
9. The second criticism of the Risk Council is of a more institutional nature. Regarding the composition, a complaint is that EU central banks will be *over*represented and EU supervisors will be *under*represented in the Risk Council. Frankly, I agree. Inviting ECB General Council members to sit on the Risk Council, while national supervisors are only repre-

sented by the three presidents of the Supervisory Authorities makes the balance uneven. Equally important is that this proposal does not do justice to the importance of supervisory information for macro-prudential analysis and underestimates the importance of a real dialogue between central banks and active supervisors. However, with more than 50 national supervisors in the EU, it is important to strike a balance between participation of supervisors and the effectiveness of the Risk Council. If membership is extended to national supervisors we can perhaps involve them on a rotation basis. It goes without saying that the chairs of the European level three committees (the future Authorities) should become full and permanent members of the Risk Council. An issue to address is whether the national supervisors should have voting rights. Here I hesitate; after all, macro-prudential supervision is the primary responsibility of central banks.

10. This brings me to the choice for the ECB president as chairman of the Risk Council. Non-euro area EU countries have opposed this, as it would exclude the possibility that one of their representatives would chair the Risk Council. However, I am still of the opinion that the ECB president is best positioned in the EU to chair the Risk Council.
11. Third, there is also still lack of clarity on the working procedures of the Risk Council, including the preparation of its meetings. Here, I see a role for the Banking Supervision Committee (BSC), at present an ESCB body, composed of EU central banks and financial supervisors. The Banking Supervision Committee can only play this role if its mandate and composition are changed. The mandate of the BSC would be to present clear risk analyses to the Risk Council, even if controversial. The cross-sectional dimension of the financial system also pleads for expansion of BSC membership to include supervisors of insurance, securities and pension firms. This could be achieved through participation of one representative of the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) and the Committee of European Securities Regulators (CESR), similar to the current participation of the Committee of European Banking Supervisors (CEBS).

Recommendation: European System of Financial Supervision

12. The De Larosière group has also given advice on how to address shortcomings in the micro-prudential supervisory structure. In this respect they propose to set up a European System of Financial Supervision, being a network of national supervisors and so-called European Authorities. These European Authorities would be the successors of the current Level 3 Committees CEBS, CEIOPS and CESR. The

Authorities would continue to perform all the functions of the Level 3 Committees but, in addition, would carry out a number of specific new tasks. As there are many, I will not go over them one by one. The crucial point is that these new

tasks would bring about a transfer of decision-making powers from the national to the European level. Notably, the group advises the European Authorities to have binding mediation powers in case of cross-border disputes between national supervisors.

13. I fully agree with the group that stronger cross-border supervision in Europe is highly desirable. In fact, I would be in favour of even more far-reaching proposals towards supranational supervision in Europe. But only if the necessary requirements for such a historical move are fulfilled. The most important requirement concerns the issue of burden-sharing. Indeed, the Achilles' heel of this part of the De Larosière report is that too little is said about this central issue. Before we can transfer decision-making powers to the international level, we really should first agree on burden-sharing arrangements. So the advice on the European System of Financial Supervision is not sufficiently balanced. I see two solutions to this. One is to decide on EU burden-sharing arrangements, which is of course easier said than done. The other, second-best solution would be to strive for the time being for less decision-making powers at the European level than has been suggested by the group, and working hard on solutions for the burden sharing issue.
14. I am in favour of burden-sharing arrangements at the European level, though fully aware of all the difficulties involved. But if the end goal is European supervision for pan-European financial institutions, there is no alternative. For burden sharing arrangements to be credible, they should be legally binding and preferably enshrined in the Treaty. It is a misconception that effective burden-sharing arrangements can be made in Memoranda of Understanding. Burden-sharing arrangements should also be incentive-compatible. To this end, a mix of general and specific burden-sharing is preferable. Under an arrangement of general burden-sharing, all member states contribute proportionally, e.g. to the size of their economy, implying a partial transfer of budgetary responsibility to the EU level. This makes sense, since the stability of the European financial system is a public good and of benefit to Europe as a whole. The proportion of general burden-sharing should be kept relatively low however, as it involves cross-border fiscal transfers. This explains why specific burden-sharing

arrangements are also needed. Under such arrangements, only the countries confronted with a financial institution in difficulty contribute. Firm-specific arrangements give Member States the right incentives to perform their supervisory duties well.

15. Although a decision on burden-sharing is a necessary condition for a fundamentally new European supervisory structure, we can still make progress without it. In this respect I envisage grey and white areas. White areas refer to tasks that should be performed at the EU level. These tasks include the licensing and supervision of EU-wide institutions, such as credit rating agencies and platforms for over-the-counter derivatives. It is also conceivable that the Lamfalussy process can be further streamlined by transferring certain decision-making powers to the Authorities. Close to the white areas, there are grey areas, which relate to tasks that can be transferred to the European level, but only if certain requirements are fulfilled. For instance, under the strict requirement that the confidentiality of supervisory information is guaranteed, the supervisory Authorities could be given the competence to send binding information requests to national supervisors.
16. One last point I would like to make about the new micro-prudential supervisory structure relates to its sectoral design. The group's advice to start with sector-specific Authorities should be reconsidered. The distinctions between financial sectors and products have become blurred, which makes a sector-based supervisory approach less effective. Indeed, the trend in national supervisory structures is towards cross-sectoral supervision. The new European supervisory structure should follow this trend and therewith reduce the risk for supervisory underlap and overlap.

Turning to a Global Perspective

17. So far I have discussed the challenges and trade-offs involved in transforming the supervisory structure in Europe. While necessary, this is not a sufficient step and more needs to be done. The global nature of the crisis underlines that the financial stability of Europe also depends on the quality of financial supervision *outside Europe*. Let me briefly raise just two key issues regarding international supervision that warrant further attention, without going into detail.

Scope of Supervision

18. The first issue is the scope of financial supervision, which should be broadened. Key players in the international financial arena, such as credit rating agencies, hedge funds and credit counterparties, are not or only very lightly supervised. Yet, the crisis has demonstrated that their activities could pose system-wide risks, either directly or by triggering excessive risk-taking behaviour by financial institutions. Some form of supervision of these institutions is therefore legitimate. But this task won't be easy as some hurdles are hard to overcome.
19. The European Commission has taken steps to supervise credit rating agencies in Europe. As I mentioned, it appears logical to license and supervise such agencies at the credit rating agencies are globally active, a global approach may be even more effective. The proposals

of the European Commission constitute a first and necessary step towards global supervision of credit rating agencies in the years to come. With regard to hedge funds, it is beyond dispute that they may under certain circumstances have a destabilizing influence, although they did not trigger the present crisis. As indirect supervision of hedge funds, via their regulated counterparties, has proven less effective in limiting the risks these entities pose, direct and tighter supervision of hedge funds is needed. In this respect, the Commission's recent proposal on a regulatory and supervisory framework for hedge funds and other alternative investment managers can be welcomed. Note however that supervision on hedge funds is complicated by the lack of an encompassing definition of hedge funds and the risk that these entities will move to places with a more hedge fund friendly regime. The first logical step is to register hedge funds, to force them to report on developments in core financial indictors and open positions in excess of certain thresholds and to subject hedge fund managers to a fit and proper test.

20. The second issue concerns the need to improve the cooperation among supervisors. Under the auspices of the G-20 quite a few global colleges of supervisors have been established to foster international cooperation between supervisors. It is expected that more global colleges for significant cross-border firms will become active in the near future. While colleges are a sensible approach to dealing with the global nature of the financial industry, they have their limitations, especially in a global context. In contrast to EU colleges, global colleges have no legal basis, and this hampers supervisory cooperation and information-sharing. De Nederlandsche Bank currently chairs two global colleges. In these colleges we provide for several IT tools to encourage as much information-sharing and cooperation as possible, provided that the confidentiality of supervisory information is assured.

Conclusion

21. Ladies and gentlemen, let me conclude. The crisis has reminded us all too well that a new structure for financial supervision in Europe is urgently needed. In a European context, the proposals of the De Larosière group are a good point of departure, though specific amendments are required. At the end of May, the European Commission will present its reaction to the De Larosière group proposals. I will give our present position. To improve macro-prudential supervision, the European Systemic Risk Council should be set up as soon as possible. Open issues about its mandate and institutional design should be resolved. Regarding micro-prudential supervision, I am in favour of more centralised European decision-making, but only if the necessary requirements for such a leap forward are fulfilled. The central issue we need to settle on is burden-sharing at the European level. In a global context, the scope of supervision should be broadened and include all financial systemically-relevant institutions. In line with the G-20 declaration, the functioning of colleges of supervisors should be supported.

Lucas D. Papademos

Vice President of the European Central Bank

The "Great Crisis" and Monetary Policy: Lessons and Challenges

1 Introduction

Almost two years have passed since the eruption of the financial market turbulence which progressively evolved into the deepest and broadest financial and economic crisis since the 1930s. There is no doubt that the global and European economies are going through a "great crisis", one of exceptional proportions, in terms of its impact, scope and duration. Moreover, the current crisis appears to be "beyond compare" because although it does share important features with previous crises, it is also characterised by some unique ones relating to both its causes and its dynamics. I want to thank you for inviting me to address this prestigious conference and speak about the lessons from this crisis for monetary policy and the challenges that lie ahead in the new macroeconomic environment that is likely to emerge.

The events of the past two years have raised a number of important issues concerning the prevention and management of crises and allowed relevant lessons for market participants and policy-makers to be drawn. The underlying causes of, and the contributing factors to, this crisis, as well as the events and processes that determined its evolving nature and intensity over time, point to several conclusions about the role of the public authorities – central banks, supervisors and governments – in safeguarding financial stability and about the effectiveness of the existing institutional framework and the available policy instruments in achieving this objective. They also raise questions about the functioning of financial markets and institutions, in particular their capacity to price, allocate and manage risk efficiently.

In my remarks, I will focus on the contribution of monetary policy to preventing a financial crisis and – if one occurs – to mitigating its impact on the financial system and the broader economy. More specifically, drawing lessons from the current crisis, I will address the following questions:

- What is the role of monetary policy in dealing with a financial crisis and in helping to safeguard the stability of the financial system, while at the same time ensuring the preservation of price stability?
- How effective have monetary policy instruments and the "non-standard" measures taken by central banks, notably the ECB, been in mitigating the impact of the crisis on the economy, by promoting the orderly functioning of money markets and fostering the provision of credit to the private sector?
- As conditions normalise and we need to look beyond the crisis, a crucial issue is: what is the appropriate exit strategy that can ensure the preservation of price stability and the gradual return of markets to conditions of normality where financial institutions do not need to rely on the extraordinary measures of central bank financing and government support?
- Finally, in the post-crisis macroeconomic environment, what can monetary policy do to reduce the likelihood of a financial crisis, like the current one, occurring again and thus help to prevent its potential adverse effects on economic activity and price stability?

2 Dealing with the Financial Crisis: the Role and Effectiveness of Monetary Policy and Liquidity Management

Let me first concentrate on the role of monetary policy – and more generally central bank policies – in dealing with a financial crisis and how this role can be performed in a manner that is compatible with the preservation of price stability. In doing so, I will highlight the actions taken by the ECB during the current crisis and I will assess their effectiveness.

The ECB and the Eurosystem have as primary objective the maintenance of price stability. At the same time, the Eurosystem aims to safeguard financial stability.[1] The two policy goals are, in general, positively related. Price stability is a necessary condition for financial stability, which in turn is essential for the effective transmission of monetary policy. Disturbances that result in severe financial market turbulence, which disrupts the intermediation process and threatens the stability of the financial system, are likely to have adverse consequences for economic activity and price stability. But this is not always the case, as other factors or processes can counteract the impact of financial market stresses on price developments. There are occasions when the constellation of disturbances affecting the economy can lead to situations that may pose policy trade-offs.

When assessing the role of central bank policy in supporting financial stability, it is important to distinguish between a change in the monetary policy stance – that is, a change in the policy rate and/or in the supply of central bank money – and the management of liquidity that aims to mitigate the impact of shocks on the interbank money market so as to ensure its orderly functioning and the efficient transmission of monetary policy to the economy. This distinction is crucial both for substantive reasons and in order to better understand the rationale of the policies pursued by the ECB – the various standard or non-standard measures taken – that have aimed at counteracting the effects of the crisis on the financial system, economic activity and price stability.

Since the financial turbulence erupted in summer 2007, financial and economic developments as well as central bank policy responses can be usefully examined and assessed over two time periods. During the first period, from early August 2007 until early October 2008, the ECB did not ease the stance of monetary policy – as defined by its key policy rates – to address financial market tensions. On the contrary, in July 2008, it raised its key policy rates by 25 basis points to counter increasing inflationary pressures and medium-term inflation risks. Nevertheless, from the onset of the crisis in August 2007, the ECB took swift and decisive action to provide liquidity in the interbank money market in order to alleviate market pressures and ensure, to the maximum extent possible, that liquidity problems would not turn into solvency problems, and that systemic risk would be effectively contained.

During this first period, the Eurosystem engaged in active liquidity management, adjusting the intertemporal distribution of liquidity provision within the reserve maintenance period, but without changing the total supply of bank reserves over the entire maintenance period (of, in most cases, 28 days). At the same time, the maturity profile of the refinancing operations

[1] *See the Mission Statement of the Eurosystem (www.ecb.europa.eu).*

was altered, with more central bank liquidity being provided to banks for periods up to three months (and as of March 2008, also up to six months), and correspondingly less in the weekly main refinancing operations, so that the overall supply of bank reserves was kept broadly unchanged. As a result, between the end of June 2007 and the end of September 2008, the balance sheet of the Eurosystem increased only moderately by about EUR 100 billion.[2]

To sum up, for more than a year after the eruption of the financial market turmoil, the unfavourable combination of, on the one hand, persisting and increasing inflation risks and, on the other, substantial stresses in the financial system and risks to its stability required a "separation" of the monetary policy stance from the management of liquidity. The former was defined so as to achieve the primary objective of preserving medium-term price stability. The latter aimed at, and was effective in, mitigating pressures in the money market and tensions in other financial markets, as measured, for example, by CDS spreads and corporate bond risk premia, which gradually eased.

With the collapse of Lehman Brothers in September 2008, the crisis entered a new phase: it intensified greatly and abruptly, spread across economic sectors, and broadened globally, affecting advanced, emerging and developing economies. Risk aversion rose dramatically and confidence plummeted as shown by several indicators, stresses in the banking system increased, the money market became dysfunctional, and world economic activity weakened substantially accompanied by a sharp drop in world trade and a marked decline in commodity prices.

The sudden and dramatic deterioration in financial market conditions and the macroeconomic environment changed the outlook for price stability and inflation risks diminished significantly in the euro area and globally. At the same time, the risks to financial stability increased. In response, the ECB and other major central banks eased monetary policy and injected large amounts of liquidity, also employing non-standard policy measures. Over the seven months since the financial crisis deepened and broadened, the ECB reduced its key policy interest rate by 325 basis points, to 1%. The magnitude of the monetary policy easing over such a short period of time was unprecedented and highlighted the exceptional policy response to the crisis. Equally unprecedented has been the expansion of liquidity provided by the ECB in the interbank money market.

Indeed, the provision of liquidity by the ECB to the euro area banking system has been extraordinary in size and scope, and has involved implementation of non-standard measures. Following the Lehman Brothers bankruptcy, banks became ever more reluctant to lend to each other as a result of a sharp increase in the perceived risks of counterparty default and a continued lack of transparency about the health of banks' balance sheets.[3] To ease banks' severe funding problems, the ECB took unprecedented steps and increased its intermediation activity. Since October 2008, the ECB has provided unlimited funding in euro at fixed interest rates over periods up to six months against

[2] *At the end of September 2008, the size of the balance sheet of the Eurosystem was EUR 1,013 billion, an increase of 11% compared with its size at the end of June 2007, before the turmoil erupted.*

[3] *The effects of asymmetric information and counterparty credit risk on the interbank market and the various policy responses are analysed in Heider et al. (2009).*

an expanded list of assets eligible for use as collateral in Eurosystem refinancing operations. In addition, the ECB has supplied liquidity in other currencies, notably US dollars, on the basis of a swap agreement with the Federal Reserve. This extraordinary expansion

of liquidity provided to euro area banks is reflected in the growth of the Eurosystem's balance sheet. Between the end of September 2008 and the end of April 2009, the (simplified) balance sheet of the Eurosystem increased by EUR 456 billion, reaching EUR 1.51 trillion on 24 April 2009, which is equivalent to about 16% of the 2008 euro area nominal GDP. By comparison, over the same period, the size of the Federal Reserve System's (simplified) balance sheet increased by USD 966 billion to USD 2.18 trillion, equivalent to about 15% of the 2008 US nominal GDP.

Have the policy actions taken by the ECB been effective? They have resulted in a significant improvement in money market conditions. They have also reduced the cost of financing of the economy, contained the impact of the crisis on economic activity and minimised the risk of deflation. The spread between the three-month EURIBOR (Euro Interbank Offered Rate) and the three-month EONIA (Euro Overnight Index Average) swap rate, a widely used measure of interbank market tensions, declined by almost 130 basis points over the past seven months, from the highs of above 180 basis points recorded in October 2008 to just below 60 basis points in mid-May 2009. Moreover, money market rates have declined even more from the peaks reached in October 2008. For example, the three-month EURIBOR stood at 1.27% in mid May 2009, more than 400 basis points lower than its peak value of 5.39% in October 2008. These are favourable developments also relative to those observed in other major money markets, where interest rate spreads and levels have been falling sharply as well.[4]

The transmission of the policy rates to money market interest rates is an important, but intermediate, step towards bank lending rates. The structure of the euro area financial system, with the dominant role played by the banking system in the financing of the economy, implies that the transmission of the ECB's policy rates to the euro area bank lending rates is of utmost relevance for economic activity. Until October 2008, the borrowing costs of households and firms seemed to have increased compared with the policy rate, as bank lending standards tightened and bank interest rates followed the path of the EURIBOR. But the substantial reduction in policy rates and the unlimited provision of liquidity to the banking system over the past seven months have resulted in a decline in bank lending rates, particularly as regards short-term credit.

[4] *For example, the corresponding US money market spread, the three-month LIBOR (London Interbank Offered Rate) minus the OIS (Overnight Indexed Swap) rate, had declined to just under the 100 basis points mark in April 2009.*

Nevertheless, financing conditions have remained tight and growth in credit to the private sector has decelerated, partly as a consequence of the deleveraging of banks' balance sheets and persisting stresses in the bank wholesale funding markets. After a prolonged period of "search for yield" by investors and the accompanying excessive growth of credit and leverage, the large write-downs on bank assets, the reduced bank profitability and the low confidence in the health of the banking system have forced banks to embark on a process of deleveraging. Needless to say, the ongoing structural adjustment in the banking sector and the low market confidence cannot be counteracted by monetary policy. To address these developments and help strengthen banks' balance sheets, governments have provided a significant amount of support to banks in Europe and elsewhere, through capital injections, the provision of government guarantees on new bank debt as well as asset relief schemes aiming at removing troubled assets from banks' balance sheets.[5] The common goals of these government measures are to safeguard financial stability, help restore the provision of credit to the economy and bolster confidence in the soundness of the financial system and in the prospects of the economy.

At the current juncture, a key feature of the crisis is a mutually reinforcing interaction between, on the one hand, the weakening of economic activity and rising unemployment, and, on the other hand, the process of deleveraging of banks' balance sheets and the persisting stresses in some bank funding markets. The weakening of economic activity could lead to a further deterioration in bank balance sheets and prolong the deleveraging process. This could limit the willingness of banks to supply credit, which would adversely affect economic activity and increase the likelihood that banks will suffer further credit losses and tighten their lending standards. The deleveraging process and the emergence of a strong adverse feedback loop between the real economy and the financial sector will undoubtedly affect the impact of monetary policy on the economy and will make it harder to assess its effectiveness. This also underscores the importance of effective implementation of the government measures to strengthen bank balance sheets and of other policy actions that can improve the functioning of funding markets.

At its meeting on 7 May 2009, the Governing Council of the ECB decided to lower the interest rate on the main refinancing operations by 25 basis points to 1% and to keep the interest rate on the deposit facility unchanged at 0.25%. We also agreed on important measures of "enhanced credit support", aimed at encouraging banks to expand credit to the private sector, improving market liquidity and funding conditions for banks and enterprises and, more generally, enhancing the transmission of monetary policy actions to the real economy. These measures include the purchase of euro-denominated covered bonds issued in the euro area, the provision of central bank liquidity with a maturity of 12 months to the banking system, and making the European Investment Bank an eligible counterparty in the Eurosystem's monetary policy operations.

[5] *In the euro area, banks had received just over EUR 113 billion of capital injections from governments and around EUR 300 billion of government guarantees by early May 2009.*

3 The Exit Strategy from the Extraordinary Policy Measures Taken During the Financial Crisis

To sum up, the monetary policy responses of the ECB and the other major central banks to the current crisis, especially since its deepening and broadening in September 2008, have been extraordinary – indeed, they can be labelled "unprecedented". But they have been appropriate in the light of the severity and scope of the crisis, and its potential effects on financial stability and price stability. Unprecedented has been the extent of the monetary policy easing since last autumn; unprecedented has been the amount of liquidity provided by the Eurosystem to the banking system at different maturities and in different currencies and the related expansion of its balance sheet; and unprecedented has been the use of "non-standard" measures to provide central bank liquidity and support the provision of credit to the private sector. These facts underscore the importance of adopting an appropriate exit strategy from the extraordinary macroeconomic stimulus, the government bank support schemes and the non-standard monetary policy measures.

The features of the appropriate exit strategy and the pace of its implementation will depend on several considerations, but let me emphasise two. The first is the overriding goal to effectively counter any risks to price stability over the medium to longer term and ensure that medium-term inflation expectations remain firmly anchored to price stability. The second is the need to progressively reduce the reliance of the banking system, and more generally of the financial sector and the economy, on government support schemes and central bank non-standard measures, which are of an exceptional and temporary nature, and to restore the normal functioning of markets. To this end, once financial conditions and the macroeconomic environment improve, the non-standard monetary policy measures taken should be quickly unwound and the liquidity provided should be absorbed in a timely manner.

The effective implementation of the exit strategy will have to address a number of issues. The ease and speed with which the central bank can revert from the non-standard to normal operating procedures in a smooth manner will depend on the resolution of the underlying problems causing the dysfunctioning of the money market. In particular, transparency and confidence in the reporting of market participants' exposures to toxic assets and highly risky loans must be such that adverse selection, which has been a cause of dysfunction of the money market, ceases to be a problem. Moreover, any changes in the operational framework should be clearly communicated by the central bank with a sufficient lead time to allow market participants to prepare and adjust their liquidity management. The ECB and the Eurosystem are committed to pursuing such a timely and transparent communication policy.

Another issue of relevance for the implementation of the appropriate monetary policy stance in the context of an exit strategy is the careful assessment of the extent to which parts of the monetary policy transmission mechanism have been affected by the financial market turbulence, and the implications of this for the conduct of monetary policy. For example, during the crisis the ratio of the broad monetary aggregate M3 to the monetary base M0 has dropped rapidly and substantially because the provision of liquidity by the central bank is being only partly transmitted – and to a much lesser extent

than in normal times – to the bank credit market and the real economy. Once the economy recovers and the deleveraging of banks' balance sheets is complete, the value of this "money multiplier" will start reverting to normal. Vigilance and appropriate policy responses are therefore needed to avoid an excessive expansion of credit to the economy. These concerns may seem premature at the present juncture of tight financing conditions, but it is important to be prepared so that the exit strategy is implemented effectively and we avoid sowing the seeds of credit and asset market excesses in the future that could constitute a risk to price stability.

One attractive feature of most non-standard measures used by the ECB is that they can be easily unwound and that the liquidity provided can be withdrawn automatically at the maturity of the refinancing operations. Of course, the relative advantages of different non-standard measures with regard to their unwinding should be judged against their effectiveness in providing the necessary credit support during the crisis. And the effectiveness of different measures depends on the economy's financial structure, for instance the extent to which the financing of the economy relies on the banking system, as is the case in the euro area, or it is market-based, as is the case in certain other advanced economies.

Finally, the timing of the implementation of an exit strategy will clearly depend, first and foremost, on the outlook for price stability, which is partly related to the pace of economic recovery and the return to normality in financial markets. Recently, we have observed an increasing number of positive signs suggesting that the economy is stabilising and that the recovery may start sooner than previously envisaged, despite the further strong deterioration of economic activity in the first quarter of this year. However, the available economic data and survey indicators point to a stabilisation at low levels and economic activity in the euro area is likely to gradually recover in the second half of 2009 and in the course of 2010. The monetary policy stance and the non-standard measures taken so far will ensure the preservation of price stability over the medium term and will progressively provide further support to economic activity.

4 Financial Crisis Prevention and Monetary Policy

The high uncertainty associated with the transmission of monetary policy when the financial system is under stress and the implementation challenges of the exit strategy that I previously mentioned are only two reasons that underscore the need to prevent the build-up of financial imbalances in the first place. One of the lessons from the current crisis, which is also supported by recent research findings[6], is that monetary policy tools should be among the instruments to be employed to prevent asset market excesses and the systemic and deflation risks they entail. The events of the past two years have revived the debate on whether, and to what extent, monetary policy can be used to "lean against the wind" of emerging asset price bubbles; or whether monetary policy can indeed be conducted in what could be called a "symmetric" manner over the financial cycle, that is, being accommodative in

[6] *E.g. Diamond and Rajan (2008); Adrian and Shin (2008); Maddaloni et al. (2008); Alessi and Detken (2009); De Fiore and Tristani (2009); Cecchetti et al. (2000); see also Taylor (2009).*

an environment of falling asset prices, while being commensurately restrictive during a financial market boom.[7]

Let me elaborate on these issues by first looking at periods when financial markets are declining sharply. In general, market participants will expect public authorities, including the central bank, to take measures to mitigate the impact of a major crisis once it occurs. From the perspective of the central bank, a monetary policy easing, in all likelihood, would not only be supportive of financial stability, but it would also be appropriate for achieving the price stability objective, as inflationary pressures could be expected to diminish during a severe financial market downturn and an associated weakening of economic activity. For financial institutions, however, the expectation of being "bailed out" in a crisis is likely to encourage excessive risk-taking during boom times, or even fuel an asset price

boom. The available evidence and recent research show that a higher, possibly excessive, level of risk-taking has been observed in the past during periods of persistently low interest rates.[8] In order to reduce such potentially dangerous side-effects of non-standard measures of liquidity provision and of the very low policy rates during a crisis, monetary policy would have to be sufficiently tightened during the financial boom phase. Such a policy would dampen financial market excesses through two channels. It would tend to reduce asset prices by increasing the rate at which an asset's future income stream is discounted. Most importantly, the anticipation of such a policy response would reduce the likelihood of a speculative bubble emerging in the first place, by affecting investment behaviour and reducing the level of risk incurred by financial intermediaries in their lending.[9]

Can such a "symmetric" monetary policy response to financial market cycles be effectively implemented? The ECB's monetary policy strategy offers an appropriate framework, and one that seems better suited than the traditional inflation targeting framework, for two main reasons. First, the ECB defines quantitatively its price stability objective – an inflation rate below, but close to, 2% – in a manner that would allow the conduct of a more restrictive monetary policy during a period of buoyant financial markets, even in an environment of relatively subdued inflationary pressures. In other words, leaning against the wind of booming asset prices by raising the policy interest rates would, even in the short to medium term, be compatible with the ECB's monetary policy strategy aiming at consumer price (HICP) stability. Leaning against the wind would likely result in lower consumer price inflation over the short to medium term, but would be expected to be more

[7] *See pertinent discussion in Kohn (2006 and 2008).*

[8] *See Jiménez et al. (2007).*

[9] *See Diamond and Rajan (2008); Cao and Illing (2008).*

effective in maintaining price stability over the longer term, by helping to prevent the materialisation of deflation risks when the asset bubble bursts.

The second reason is that the emphasis placed by the ECB on the analysis of monetary and credit developments in order to identify longer-term inflation risks can also provide signals of growing financial imbalances, which in principle could be used to contain financial market excesses.[10] Even if leaning against the wind would not be an explicit policy aim, a greater reliance on the analysis of monetary and credit developments when defining the appropriate monetary policy stance would likely result in a tighter policy during times of booming financial markets and a more accommodative one in less favourable conditions. This is because asset price booms are often fuelled by strong money and credit expansion. Recent research, also by ECB colleagues, has shown that financial imbalances – especially the more "costly" ones – are usually related to a large build-up of leverage in the economy, which is associated with strong money and credit growth.[11]

In practice, however, the implementation of a policy of leaning against the wind may not be straightforward. And, certainly, it cannot be based on a mechanical response of the central bank policy rate to developments in monetary and credit aggregates, not least because the recent experience has shown that rising asset prices are not necessarily closely associated with a significant increase in inflationary pressure and medium-term inflation risks that would call for a tightening of monetary policy. Structural factors, such as increases in trend productivity growth, technological innovation or the inflation-dampening effects of global competition, can contribute to keeping consumer price inflation low for a considerable period of time while asset prices are rising rapidly. In such situations, the use of the single monetary policy instrument, the interest rate, to pursue the objective of price stability might require a change in one direction, but financial stability considerations might point in another direction.

Moreover, it has been argued that monetary policy is "too blunt a tool" to be effective in preventing the build-up of imbalances, because interest rate increases might need to be very large in order to significantly influence asset price dynamics and risk-taking in periods of "irrational exuberance" in financial markets. A number of counter--arguments supported by empirical evidence can be advanced to address this traditional concern. *First*, the experience during the current crisis with off-balance-sheet structured investment vehicles (SIVs) suggests that the profitability of such entities, whose balance sheets are characterised by high leverage and a maturity mismatch, is very sensitive even to small changes in the spread between long and short-term interest rates. To the extent that the central bank is able to affect the slope of the yield curve, such a maturity mismatch and leverage would be curtailed.[12] *Second*, while central bank warnings about observed excessive

[10] *See Alessi and Detken (2009) and Gerdesmeier et al. (2009).*

[11] *See Detken and Smets (2004); Adalid and Detken (2007); Goodhart and Hofmann (2008); Christiano et al. (2008); Baumeister et al. (2008).*

[12] *See Adrian and Shin (2008).*

risk-taking might not always have triggered immediate corrective action, their explicit communication in conjunction with relatively small changes in the key policy rate could have the desired effect. This is because a change in the policy rate would serve as a signalling device and increase the credibility of the central bank's risk assessment.[13] *Third*, by slightly increasing the price of leverage at an early stage of an asset price boom, the central bank could break herding behaviour when the development of a bubble depends on investors observing other investors purchasing the bubble-prone asset.[14] Thus the view that monetary policy may not be an effective tool to lean against the wind of asset price booms can be challenged. But no consensus on this issue has yet emerged. The effectiveness of conducting monetary policy in a "symmetric" manner over the financial cycle will have to be assessed in practice.

My remarks have focused on lessons and challenges for monetary policy in the light of the "great crisis". However, other policies should certainly also be at the centre of attention when drawing lessons from the experience of the past two years, not least because other policies can complement and support the efforts of central banks to prevent and manage a crisis. The events of the past two years have revealed several weaknesses in the financial system and highlighted important inadequacies in the regulatory and supervisory frameworks. Strengthening and broadening the regulatory framework as well as conducting macro-prudential supervision are important priorities in Europe and globally.[15] In particular, the establishment of an effective framework for macro-prudential oversight and the further development of the relevant analytical underpinnings, such as financial stability indicators as well as early risk warning and stress-testing models, would greatly contribute to financial crisis prevention.

5 Conclusion

I have characterised the current crisis as "great" and one "beyond compare". The crisis has also been a learning experience beyond compare, for market participants and policy-makers, including central bankers. What is essential now is to make sure that the lessons that have been drawn from this experience are actually learnt, and that public policy and market behaviour adapt accordingly. For monetary policy, this implies that financial stability considerations should be taken into account when formulating policy aimed at preserving price stability over the medium and longer term. In particular, close monitoring and deeper analysis of asset price movements, monetary and credit developments, and the build-up of financial imbalances can provide valuable information for the conduct of monetary policy. The ECB's monetary policy strategy provides an appropriate framework for such an analysis and for effective policy formulation. The more immediate challenge for monetary policy over the medium term is to strike a balance between, on the one hand, responding in a timely and effective manner to incipient risks to price stability as the economy recovers and market conditions normalise, and, on the other hand, winding down in a proportionate manner the non-standard measures that have been implemented

[13] *See Hoerova et al. (2008).*

[14] *See Loisel et al. (2009).*

[15] *See, for example, Papademos (2009a and 2009b).*

to mitigate the adverse effects of the crisis on the banking system, financial market segments and the broader economy. Finally, I would like to stress that, just as a crisis is a multi-faceted phenomenon, the public policy response cannot rely only on one policy instrument or the actions of one authority. The joint efforts and cooperation of central banks, supervisors and regulators are necessary for effective crisis prevention and management. In this manner, we will better address the challenges that lie ahead.

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Klaus Liebscher Award

Klaus Liebscher Award for Scientific Work on European Monetary Union and Integration Issues by Young Economists

On the occasion of the 65th birthday of Governor Klaus Liebscher and in recognition of his commitment to Austria's participation in the European Monetary Union and to the cause of European integration, the Oesterreichische Nationalbank (OeNB), in 2005, established the *Klaus Liebscher Award*. This award is the highest scientific distinction, the OeNB offers every year for two excellent papers on European monetary union and European integration issues written by young economists (up to 35 years). The award is worth EUR 10,000 per paper. The papers are refereed by a panel of highly qualified reviewers. The Klaus Liebscher Award is granted this year for the fourth time. The winners of the *Klaus Liebscher Award* 2008 are *Tarek Alexander Hassan* (Harvard University) and *Anton Korinek* (University of Maryland). The papers of the laureates are available as OeNB Working Papers 154 and 155.

In the first paper *Country Size, Currency Unions and International Asset Returns* Tarek Alexander Hassan, studies the dependence between country size and asset returns. Using a theoretical asset pricing model he derives the result that countries with a larger size have lower asset returns, because they have better insurance properties in a portfolio of international investors. This theoretical prediction turns out to hold also empirically for a sample of OECD countries. Small countries therefore have to face a disadvantage when issuing securities. Even if they have the same credit quality and the same liquidity as a comparable large country they have to pay higher returns.

In the second paper *Systemic Risk: Amplification Effects, Externalities and Policy Responses,* Anton Korinek, University of Maryland analyzes the economic mechanisms, behind the current financial crises. Korinek identifies a structural problem in the risk allocation through financial markets: The interaction of liquidity constraints and security trading leads to a situation where asset prices do not adequately reflect the risks of these assets. Price signals lead market participants to take more systemic risk than socially optimal and to undervalue the social benefits of liquidity. From this theoretical analysis Korinek derives principles for the reform of capital adequacy and for crises management.

Tagungsblock 2:
Neueste Forschungserkenntnisse und ihre Auswirkungen auf die zukünftige Wirtschaftspolitik

Session 2:
What Are the Lessons from Academic Research for Future Economic Policy?

Peter Zöllner
Executive Director
Oesterreichische Nationalbank

Introductory Remarks

Dealing with the current crisis is the major current policy challenge. The issues have stirred many heated debates both in the general public and in the academic community. In these debates some fundamental questions about the future of the market economy, the role of financial regulation and of economic policy more generally have been raised. I am very happy that we have today six distinguished academics to share with us their views on some of these issues.

We have chosen a format where we have two statements for each of the following three topics: The role of governments and markets, financial regulation and finally monetary policy issues.

Governments versus Markets

While there are many controversial issues in the debate about the crisis there is a fairly broad consensus that the global financial system is damaged and that it must be fixed. What are the reasons that the financial system is broken? Is it true that the build up of the crisis was the consequence of excessive deregulation in the financial sector, the deliberate retreat of the public sector from finance and financial markets, where it should have played a much more active role as a regulator and monitor? This is an argument made frequently in the public debate. Or is the build up of the crisis rather a policy failure a consequence of wrong regulation based on flawed regulatory principles? Arguments of this kind are also frequently made. Some commentators even go so far as to conclude from the current crisis that the whole balance between government and markets that has shaped the policy environment during the last 20 years has to be fundamentally redesigned.

We are very happy to have two distinguished speakers here to shed light on this general issue of redrawing the boundaries between government and markets: *Josef Falkinger* and *Dennis J. Snower* will give us their views in the first session.

Rethinking Financial Regulation

Failures of current financial regulation have attracted particular attention and stirred much academic debate. The *Geneva Report (The Fundamental Principles of Financial Regulation* by Markus Brunnermeier, Andrew Crocket, Charles Goodhart, Avinash Persaud and Hyun Song Shin) and the *NYU-Stern Report* (Viral Acharya and Matthew Richardson (eds.), New York University Stern School of Business (2009) Restoring Financial Stability: How to Repair a Failed System, Wiley, March) are particularly well known and cover most areas of financial regulation. Also various policy initiatives in this direction have been taken. The debate seems to have identified a few areas where reform is particularly urgent: Systemic Risk, the issue of large and

complex financial institutions, pro-cyclical capital requirements, rating agencies and the so far unregulated sectors of hedge funds and private equity. Are these the major areas or do we have to extend the debate to other issues? What are the key issues of financial sector re-

form? What are the deeper reasons why financial regulation in place has failed?

Martin Hellwig and *Javier Suarez* are going to discuss these issues in the second session.

The Role of Monetary Policy

Monetary Policy has been also in the focus of the analysis of the genesis of the current crises. The claim that loose monetary policy in the US fuelled the massive credit expansion that lead to a bubble and the subsequent crisis has frequently been made in the past. It has also been controversial. But also today central banks are key players in fixing the crises and monetary policy is one of the important policy instruments. What contribution can monetary policy make to fix the crisis, how does it interact with regulation and does it have to be reformed in the future?

These are indeed difficult questions. Fortunately, we are happy to have today two speakers here who both have been working and thinking about these issues deeply and for many years: *Axel Leijonhufvud* and *Adam S. Posen*, will give us their views on these issues in the last session. I am looking very much forward to the discussions and perhaps also controversies of this afternoon.

Podiumsdiskussion I:
Ist die Grenze zwischen Staat und Markt neu zu ziehen?

Panel I:
Will We Have to Redraw the Boundaries between Government and Markets?

Josef Falkinger
Economist
University of Zurich

Will We Have to Redraw the Boundaries between Government and Markets?

The question as to whether the boundaries between the state and markets should be shifted can be approached at different levels. At the more fundamental level, the question might be: What is the right economic system? At a more pragmatic level, we have to ask: Should or will government involvement increase in view of the current crisis (whether we like it or not)?

In accordance with the different levels of the question posed in the title, my answer is threefold. First: No, there is no need to redraw the boundaries. Second: Yes, the boundaries will shift. Third: The changes required go beyond the boundaries between government and markets.

Part A: No Need to Redraw the Boundaries between Government and Markets

The fact that certain people have adhered to a naïve market ideology is no reason to now shift to a blind state ideology. Slogans such as *markets are efficient, state intervention is bad; managers are competent, politicians are corrupt* are as unfounded as their counterparts, *markets are chaotic, central coordination is better; managers are greedy, politicians serve the common cause*. The challenge is to remove the ideological boundaries instead of shifting between ideologies.

The view that market economies work well if they are not disturbed by state activity has always been wrong (and will be wrong in the future, of course) – both empirically and from the point of view of economic theory.

Empirically, any discussion about the boundaries between state and markets should bear two facts in mind. First, the government share is substantial in all advanced market economies. Second, it ranges between roughly 30% and 60% of GDP. This tells us two things: (i) strong government activity is a regular feature of market economies; (ii) there is no single, quasi-natural boundary between government and markets.

Theoretically, the foundation of market economies is given by the two fundamental theorems of welfare economics. They define the boundaries between government and markets in a rigorous and correct way by telling us that under the assumption of (i) "rational economic agents", (ii) "complete markets" and (iii) "perfect competition", we can draw two conclusions. First, in equilibrium, market outcomes will be efficient. Second, given appropriate redistribution, any efficient outcome can be realized through markets. In principle, this provides us with clear guidelines for the allocation, stabilization and distribution functions of the state. Obviously, the meaning of theory is in the premises as well as in the conclusions. If we remember this, then – from a theoretical point of view – I see no need to redraw the boundaries between government and markets.

The problem is that these guidelines have become blurred over the last 15 years or so. In my view, this is closely related to the emergence of new markets (including, in particular, new financial markets in advanced economies) and to the blossoming of some young scientific industries. I see two main errors behind the current crisis: an almost universal shift in the focus of attention from real economics to fi-

nance;[1] and a broad neglect of *underlyings*, including the assumptions underlying the efficiency of a market economy. Asset prices in the news and the *bankers' view* being presented as economic expertise in the media are prominent examples of the shift in attention. But the

shift also occurred in the scientific community. In certain environments, it seemed that *the causes and the sources of the wealth of nations* had changed from production of goods or services and the employment of human as well as non-human resources to financial wealth and its management. In order to illustrate the recent neglect of the assumptions underlying the theoretical foundation of the market economy, I would like to give three examples.

Example 1: Naive Belief in Rationality and Equilibrium

Many conclusions in monetary macroeconomics and financial modelling seem to be based on the following reasoning: Whatever happens is the outcome of a rational expectations equilibrium so there is no need to bother about drastic changes in income distribution or fundamental imbalances reflected in basic macroeconomic variables like saving rates, debt ratios or current accounts. This is not what economic theory tells us. It is instead an aberration of certain very specific though widely used models in which the role of heterogeneity of economic roles and interests is neglected and important imperfections are ignored. At the level of economic policy, this neglect is reflected by the fact that *magical polygons* have lost their appeal – in particular, the dimensions of *external equilibrium* and *fair distribution*.

Example 2: Uncritical Belief in Complete Financial Markets

Not every economic interaction is captured by the markets. This is well understood in the theory of public goods and external effects, in contract theory and the foundations of financial economics. Obviously, the problem of incomplete market interaction will be particularly severe if we have to deal with the future. This suggests a cautious approach to financial markets. Unfortunately, the opposite seems to be the case. On the one side, there was the euphoric conviction that any incompleteness could be cured by financial innovations. On the other side, ample financial marketing activities promoted the confused belief that any new financial product is a financial innovation satisfying a missing market.

Example 3: Presumption of Competitive Financial Markets

Industrial economics, including new empirical industrial economics in more recent years, has been one of the most dynamic research fields since the 1980s. The dynamic was driven by the

[1] *The shift in attention to financial business may have been fostered by the almost global wave of privatization, but shifts of boundaries between the real and the financial world are still a different thing to a shift between the public and the private sector.*

fact that market power and imperfect information are important features of real markets. Given the growing importance of the financial industry and the rise of finance as an academic field, one could expect financial industrial economics to be a core topic in the finance literature and in the finance curricula – examining, for instance, excessive returns and fees or the dead weight loss from tax avoidance and subsidies. To my knowledge, this has not been the case so far. This is reflected by another observation. In almost all fields of real economics it has become quasi a required standard to account for some market imperfections. For instance, new trade or new growth theory have created a healthy niche for themselves by considering fixed costs, oligopolistic and monopolistic competition, and so forth. Another even more striking example is macroeconomics. Distortions through search costs or union power in the labour market are a must of modern theoretical and empirical research and teaching. By contrast, frictions and rents in the financial market are more or less missing from the analysis.

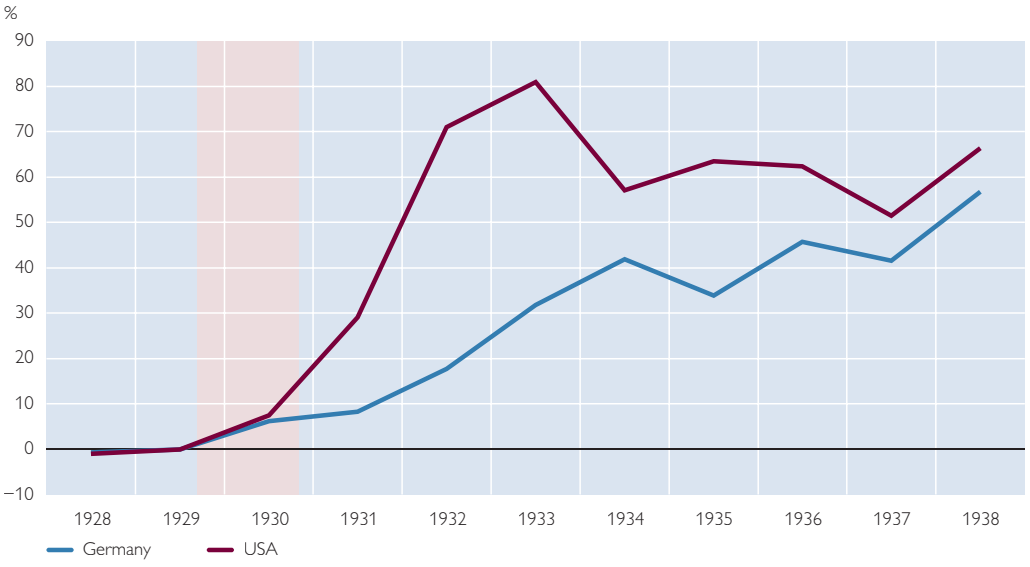
Part B: Yes, the Boundaries Will Shift

In short, the first answer was that ideologies and shifts between ideologies are unhelpful. The boundaries between government and markets are correctly defined by the theoretical foundations of the market economy provided by economic theory. Rather than redrawing boundaries, we should remember basic economics and fix some holes in the business and policy domain as well as in the area of academic research and teaching. In particular, this applies to management and regulation in the financial industry, as far as business and policy is concerned, and to finance and monetary macroeconomics, as far as scientific work is concerned.

While the first answer addressed the principal normative aspect of the question posed, my second answer is

Chart 1

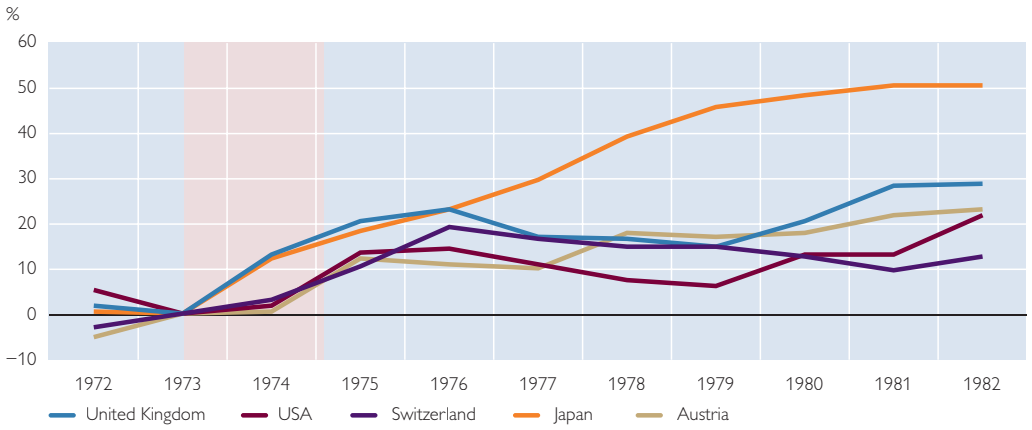
Great Depression 1929 – Percental Change of Share of Public Expenditures in GDP Relative to 1929



Source: Federal Ministry of Finance Germany and from www.usgovernmentspending.com, *author's calculations.*

Chart 2

Oil Crisis 1973/74 – Percental Change of Share of Public Expenditures in GDP Relative to 1973

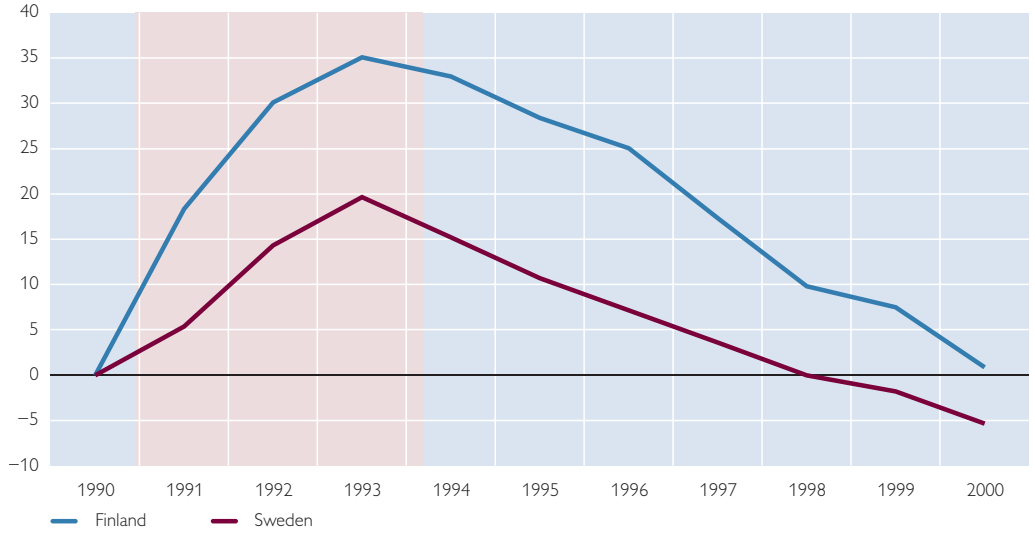


Source: Data from UK National Statistics, www.usgovernmentspending.com; IMF (JPN, AUT), Public Finances of Switzerland, author's calculations.

Chart 3

Scandinavia Crisis 1990 to 1993

% change of share of public expenditures in GDP relative to 1990



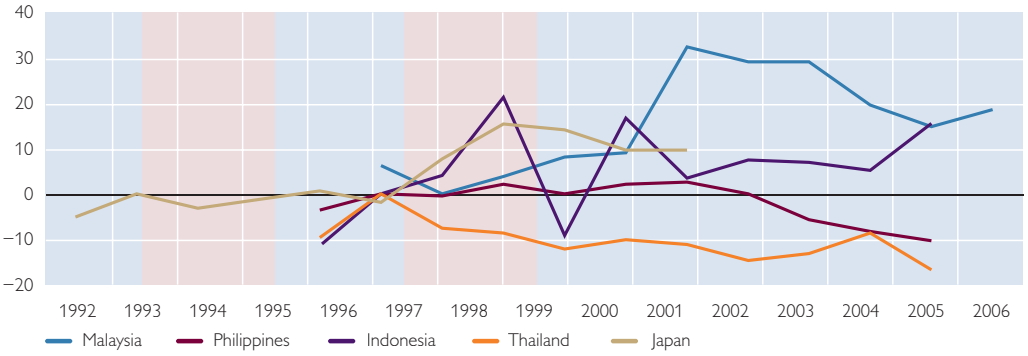
Source: Data from OECD (Sweden); Statistics Finland, own presentation.

more pragmatic and refers to the level of positive analysis. Of course, the crisis will raise government shares for quite a while. Even if ex ante a larger state is not needed to avoid a crisis, increased involvement of the state will be inevitable ex post so as to stabilize both the financial system and the real economy. A look back into past crises sheds light on this fact. The figures show for four prominent episodes of crises – the Great Depression, the Oil Crisis, the Scandinavia Crisis and the Asia Crises including Japan – the dynamics of the government share in the aftermath of the crisis. For the sake of comparability, the presentation focuses on the percentage changes of public expendi-

Chart 4

Japan Crisis 1993/94 and Asia Crisis 1997/98

% Percental change of share of public expenditures in GDP relative to 1993 (Japan) respectively to 1997 (other countries)



Source: United Nations Economic and Social Comission for Asia and the Pacific (UNESCAP), author's calculations.

tures shares relative to the government share at the beginning of the respective crisis.[2]

The only controversial question is to what extent the increased share of public expenditure in GDP will be accompanied by a rise in state ownership. Should the state acquire equity capital when rescuing insurance companies, banks or other firms? In principle, acquiring ownership in exchange for financial means is a standard deal in a market economy. Obviously, if the state is involved, this should only happen in exceptional situations. The goal cannot be the nationalization in the long run. However, in difficult phases, history has seen quite some variation of state ownership in real market economies without these markets being destroyed. An example are the difficult but successful decades following the Second World War.

As certain as rising government shares are my concerns about them. First, a larger government share does not necessarily mean a stronger government. States may be overloaded or even fail. The loss of confidence in markets might be followed by a loss of confidence in democratic governments. Second, the pro-state mood risks being abused by all kinds of lobbies – from companies to industries, unions and political organizations – seeking to secure benefits for themselves. This further increases the burden on the state and keeps inefficient structures alive. Third, the global character of the current crisis requires supranational measures rather than nationalistic reactions. The history of the periods before and after the First World War showed us the road from nationalistic protectionism to catastrophe. Finally, the rise in government shares may have undesirable distribution effects. One inequity is almost unavoidable in the short run: Due to the key role of the financial sector, the players responsible for the current crisis will also have to be saved – at least partly. In the long run, either the taxpayers will pay for the incurred public debt or, if inflation returns, gov-

[2] *The figures are based on government shares reported in the following data sources:* Great Depression 1929: *Federal Ministry of Finance Germany; www.usgovermentspending.com;* Oil Crisis 1973/74: *UK National Statistics; www.usgovermentspending.com; IMF (JPN, AUT) Public Finances of Switzerland;* Asia Crisis 1997/98 and Japan 1993/94: *United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP);* Scandinavia Crisis 1990-93: *OECD (Sweden); Statistics Finland.*

ernment bond owners will lose part of their savings. In view of this fact and the current risk of deflation, the options of financing public debt by the central banks should be discussed in full transparency. For an open discussion of options, the long-run distributional aspects should also be considered when evaluating the pros and cons of stocks for the government in exchange for financial help. Public property acquired now can generate important privatization revenues in the future.

These worries should not be taken as the bleak prophecies of a gloomy scientist. I do not think that history will repeat itself in the form of another political catastrophe following a great depression. My hopes are based on three facts. First, despite the many aberrations I criticized in Part A, scientific progress in economics has improved

macroeconomic crisis management enormously. Second, Europe is a more stable democracy than in the 1920s and, third, there is much more global political will for economic stabilization.

Part C: Beyond the Boundaries between Government and Market

Government (or state) versus markets is only one dimension along which causes and cures for the current crisis should be traced. A society relies on more than these two institutions. In particular, government (or state) must not be set on a par with critical thinking, long-term orientation, pro-social attitudes, social norms, public sphere or other things one may have missed in the recent past and now wish to promote in the aftermath of the current crisis. I will illustrate this using three examples.

Example 1: Bounded rationality, herding, overconfidence, irrational exuberance, etc. are not bound to (financial) markets. They are also present in public opinion formation, attention allocation in the media and economic thinking. The cure lies not in more government activity but in critical minds; long-term memory; robust thinking; and focusing on fundamentals (of theory and reality). The challenge is to design institutions that reward such behavior and make it effective at the collective level.

Example 2: Greediness, free-riding and other forms of bad behavior are not bound to the private sector. As Adam Smith emphasized, self-interest is a central motivational source of growing economic wealth if adequately checked by competition and by laws. But these checks have to be complemented by values and social norms (such as Smith's "fellow feeling", "sympathy" or "sense of duty").

Example 3: Incomplete and imperfect competition are not the sole privilege of markets and economics. Star contests, selection of elites, propagation of information, election campaigns and promotion of ideas all suffer from similar flaws. Again, the cure lies not so much in an expansion of government

activity. What is required instead are critical public discussion of success stories, promotion filters and remuneration systems in all areas of society, as well as a critical reflection of the fact that prices may be wrong also in the space of public recognition.

Conclusions

1. Remember basic economics, in particular the boundaries reflected in the two fundamental theorems of welfare economics. Account for them more carefully in the financial sector.
2. Save the system through globally coordinated stabilization policy even though this will raise government shares substantially.
3. Raise attention for fundamentals and real economics in the financial sector, in the media and in the scientific community. In particular, bring macroeconomic accounting and policy polygons back to mind. Extend them by aggregate financial indicators to develop a warning system.
4. Reactivate society.

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Ideas for a New Financial Architecture[1]

In designing an architecture for the future of our global financial system, we will have to address the following crucial question: How will we be able to prevent the insolvency of systemically relevant financial institutions without creating an excessive burden for the taxpayers?

While the future financial architecture will of course have to address numerous other issues (such as financial regulation, supervision and many more), the question above is nevertheless of central importance for a simple reason.

A systemically relevant institution is too large and interconnected to fail, in the sense that its default would lead to a number and scale of further defaults that are unacceptable to policy makers. So policy makers have sought to prevent insolvency of systemically relevant financial institutions at virtually all costs. They have done so by injections of equity, financed by current taxes and mainly government debt. The government debt, in turn, is to be financed by future taxes. In effect, therefore, insolvency of systemically relevant financial institutions has been prevented by bailouts whose costs fall largely on future taxpayers. Policy makers have thus grappled with the simple tradeoff of greater default risk now versus higher taxes in the future.

There is a broad perception that the danger of systemic default risk has been avoided. Participants in financial markets no longer believe that the financial system will melt down. But this outcome has come at the expense of higher future taxes. All we have done, in effect, is spread the pain, making our children pay for our misdeeds. Voters are already angry about this and once they begin to feel the burden of higher taxes, they can be expected to get angrier.

Another question we need to address is this: How can we stimulate lending in a credit crunch without encouraging financial institutions from taking on excessive risk in the future?

This question is important, since the current bailouts reward excessive risk taking. After all, it is the excessive risk takers that require the bailout. The more reckless the past behavior, the larger the size of the bailout that is required. Thus the current bailouts may sow the seeds of the next financial crises.

Tackling Insolvency Risk

My plan is a proposal for a future financial architecture that aims to prevent these problems from arising again.

Currently policy makers are exploring two ways of overcoming the danger that systemically relevant financial institutions become insolvent, without requiring the taxpayer to foot most of the bill:

(i) Competition authorities could break up such institutions in such a way that they cease to be systemically relevant.

(ii) Changing the regulation and supervision of the financial sector so as to keep these institutions' insolvency risk minimal.

Both of these avenues are clearly worth pursuing, but it is most unlikely that such policymakers' efforts will solve the underlying problem. The reasons are straightforward.

Identifying institutions as systemically relevant is difficult – partly because the interconnections among the default rates of different enterprises are hard to assess, and partly because the

[1] *I am indebted to Rod Schwartz for a valuable discussion of the underlying problems, as well as to my research assistants, Alex Giga, Stefan Jaspersen and Tobias Tesche, for their insightful support.*

strength of these interconnections itself varies over the business cycle – but it is not an impossible job and several measures of systemic relevance have already been proposed. What makes this solution unlikely to succeed, however, is politics: Breaking up large financial institutions is going to be very messy business, especially when these institutions have huge lobbying power, the boundaries between careers in politics and finance are blurry, and the definition of systemic relevance is still open to question. Moreover, in the face of ongoing financial innovation, fighting monopoly power will probably mean continually chasing after a moving target: while anti-trust policies overcome past sources of systemic risk, new sources will continually be created, requiring years of investigation and further years of litigation. Meanwhile the next financial crisis may be upon us.

Solving the problem through regulation and supervision of the financial sector also appears extremely unlikely. To avoid regulatory arbitrage (enabling financial transactions to be conducted where they are regulated least), it would be necessary for the appropriate regulation and supervision to be harmonized globally, or at least among the G-20 countries. The absence of progress on this matter – despite unanimous agreement that such harmonization is desirable and despite the length and depth of the current economic crisis – is symptomatic of a fundamental difficulty. Since the bailouts of financial institutions are all national, governments understandably insist that their regulation and supervision activities should be national as well. Otherwise regulatory rules designed in some countries could affect the size of the bailout required in other countries. Thus, while any steps in the direction of regulatory and supervisory harmonization are to be welcomed, it would be naïve for us to expect that this will be sufficient to solve the underlying problem.

There is, however, another way of overcoming insolvency risk at systemically relevant financial institutions, without requiring excessive taxpayer sacrifice. Government bailouts are meant to work by injecting tax-financed equity into these institutions; regulation and supervision are meant to work by preventing these institutions from accumulating excessive debt; breaking up the institutions to eliminate their systemic relevance makes it permissible for the government to let these institutions fold. But there is another promising way to tackle the problem, namely, to insist that the systemically relevant institutions carry debt that can be converted into equity should they become insolvent. This crisis has taught us that debt is a very dangerous way to finance rapid expansion at these institutions, since the debt is generally fixed in nominal terms whereas the value of the institutions' assets are variable and since these institutions usually have a maturity mismatch between their long-term assets and short-term liabilities. So when there is a loss of confidence and asset prices tumble, these institutions find themselves unable to pay their debts. The problem of default would disappear, however, if their debts had a special characteristic, namely that they were automatically convertible into equity in case of insolvency.

For this purpose, the regulator should require that all the debt (commercial paper and bonds) of the systemically relevant financial institutions be nondiscretionary convertible. This means that if such an institution becomes insolvent, the regulator has the right to convert this debt into equity. The size of the debt-for-equity swap is sufficient to return the institution to

solvency and restore its capital adequacy ratio to the minimum required level. What debt is converted and the terms of the conversion would depend on the seniority of the tranches and the requirement that the equity of the old stockholders would be reduced to a small fraction of that of the convertible bondholders. Observe that whereas the standard convertible bonds can be converted into equity at the discretion of the shareholder, the conversion of the nondiscretionary convertible bonds depends on the institution's solvency.

How can we determine when a systemically relevant institution has become insolvent. We know from recent experience that in the presence of toxic assets, determining insolvency becomes difficult. After all, what makes assets toxic is that they cannot at present be reliably valued, and in the absence of such valuation, solvency can of course remain a matter of dispute. The appropriate policy response to this problem is to set up a Financial Vigilance Agency (FVA), with the purpose of assessing, detecting and preventing adverse economic effects of financial products. The originators of new financial products would be required to submit the relevant information about expected benefits and adverse side-effects, of new financial products and these products could be launched only with FVA approval. The FVA would collect information about these products, analyze the systemic risks that they may generate, and submit the systemically relevant institutions that offer these products to the relevant stress tests.

The aim of these activities would be to identify information about potential hazards generated by these products and to prevent the potential harm to the economy from exceeding the benefits. The onus of proof concerning the safety of a new financial product would lie with the originator. In these respects, the FVA would serve an analogous function to the American Food and Drug Administration and the European Medicines Agency working with the national competent medicines authorities.

In short, the activities of the FVA are meant to ensure that new financial products are not toxic and do not have perverse effects on the economy. With the benefit of this work, the solvency or insolvency of systemically relevant financial institutions should become straightforward to assess. This work would effectively replace that of the rating agencies. The latter would cease to have a quasi-regulatory function (such as that accorded to them in the Basel II Accord) and instead become information providers along the same lines as financial analysts and journalists.

Through the establishment of nondiscretionary convertible bonds and the Financial Vigilance Authority, the ongoing solvency of all systemically relevant financial institutions would be assured. These institutions, in short, would have

a de facto solvency guarantee. Since policy makers have considered them too large and interconnected to fail, such a guarantee is appropriate. Unlike the current bailouts, however, this guarantee would not be financed by the taxpayers, but rather by the bond- and stockholders of these institutions.

An attractive feature of this policy is that it could initially be implemented at the national level, even in the absence of international harmonization of financial regulations. Once experiences from these policies have been gathered and evaluated at national levels, nondiscretionary convertible bonds and a Financial Vigilance Authority could be established at a transnational level, such as within the European Community. It could eventually become a component of a future Basel III Accord.

Making the debt non-discretionarily convertible would obviously raise the future financing costs of these institutions, since future bondholders would take account of the possible loss through future debt-for-equity swaps. At first glance, this might seem like a

disadvantage, due to the currently conventional view that lending can be stimulated only by reducing the debt burden of these institutions. This view is incorrect, however. One reason why the world has descended into the current financial crisis is that systemically relevant financial institutions did not have to pay for the systemic risk that they created. When deciding on how much leverage to accept, these institutions took account of the costs of their own idiosyncratic default risk (albeit on the basis of largely misguided models and misguided ratings), but they ignored the systemic risk that their leverage generated. The nondiscretionary convertible bonds would automatically make these institutions take the full costs of their risks – including the systemic costs – into account. The problem of deficient lending in a financial crisis needs to be addressed differently. This takes us to the second component of my plan.

Credit Subsidies

Faced with a massive credit crunch, governments around the world have opted to bail out the banks. The banks, in turn, have hungrily devoured the bailouts, but have remained stubbornly reluctant to lend. Instead, the bailout money is used to clear some bad debts and boost banks' reserves. Policy makers have not asked themselves whether bailouts are the most effective way of stimulating credit.

If they did, it would not take them long to realize that, no, bailouts are extravagantly ineffective and, for good measure, make the underlying problem worse. Under these curious circumstances, the time has come for us to relearn lessons that we have already learnt in other areas of policy-making.

For this purpose, let us return to the mid-1980s, when many European countries witnessed their unemployment rates ratcheting remorselessly upwards. To support the millions who had lost their jobs, some governments had granted more generous unemployment benefits and related welfare state

entitlements. In response, unemployment rates rose even more. And then, in the late 1980s, several European governments made a discovery that seems obvious in retrospect: unemployment benefits actually magnify the unemployment problem, since they reward people for not working. A more effective way forward is to reward the activity we seek to promote, namely to subsidize people for accepting employment. The upshot of this insight was a proliferation of *active labor market policies*, designed to help people help themselves.

Now we face an analogous problem in financial markets: bailouts actually magnify the underlying credit problem. They reward the banks that have engaged in the most irresponsibly risky transactions, for these transactions have created the specter of default that calls for bailouts. What the bailouts will teach the banks is clear: creating systemic risks is good business over the long haul – winning bets lead to high salaries, while losing bets are covered by the taxpayer. So the recklessness that got us into this mess will be further encouraged in the years to come.

Once again, a more effective way forward is to reward banks for the activity we seek to promote, namely to subsidize credit. If governments gave banks credit subsidies – with the subsidy payment proportional on the amount of the repaid loan (in dollars, euros, etc.) – then banks would receive compensation only when (1) they actually provided credit and (2) the loan was actually repaid. The credit subsidies would induce banks to lend to borrowers who are unlikely to default. These borrowers are precisely the ones who deserve help in surviving the current crisis.

In short, the time has come for active credit market policies that reward banks only when they do what they are meant to do, namely, lend to responsible borrowers. Credit subsidies are nothing new. They are used to promote entrepreneurship in the U.S. (through the Small Business Administration) and the EU (for example, through the European Investment Bank). What is new here is that proposed subsidies are to be given, not to particular businesses (such as small- and medium-sized enterprises), but to banks, in support of loans to whomever the banks consider worthy. The underlying idea is that banks are likely to be a better judge of credit-worthiness than the government. Predicting the probability of repayment is, after all, the business of bankers, not government officials.

Although the credit subsidies will need to be financed through higher taxes, these extra tax receipts will need to pay only a fraction of what the banks will receive in subsidies. The reason is simple. In the absence of the subsidies, there would be less lending and thus less economic activity, so that less tax revenue would be generated. Conversely, granting the subsidies will generate extra tax revenue. Thus, part of the subsidies, presumably a large part, would be self-financing.

This sensible proposal, however, faces two potential pitfalls that need to be addressed in advance. First, the credit crunch has led to a recession in many countries and, as we know, people have little demand for credit during a recession. True, but even in a recession, the demand for credit still depends on the price of credit. The cheaper it is borrow money, the more firms with sound business prospects will do so and the more households will be able to afford their mortgages. The deeper the credit-induced recession, the greater the credit subsidy that is required. Thus, the size of the subsidy will have to depend positively on risk

premia charged to business enterprises (such as those measured by yield spreads and indices of credit conditions).

Second, we clearly need a way of phasing the subsidy out once the recession is over. Since we do not want the subsidy to depend on future lobbying efforts, the subsidy must be phased out automatically. This can be achieved by making the size of the subsidy depend on the magnitude of the credit-induced recession. It is a way of minimizing what policy makers call *deadweight loss*, which means paying subsidies for credit that would have been granted even in the absence of the subsidies.

Expect lots of resistance to this proposal from the financial industry. Bankers would clearly prefer bailouts without strings attached. Who does not? Many unemployed people would also prefer benefits without strings to rewards conditional on employment. But just as governments have come to understand that it is harmful to encourage inactivity in labor markets, so they must now realize that it is not in the public interest to reward reckless risk-taking in financial markets. It is far better to reward banks for doing what they are meant to do.

Conclusion

In sum, my plan addresses two challenges in the design of a future financial architecture: (i) the solvency of systemically relevant financial institutions needs to be maintained without burdening the taxpayers and (ii) the flow of credit needs to be stimulated without inducing financial institutions to take on excessive risk. The first problem is addressed through nondiscretionary convertible bonds and the second through credit subsidies. Under this plan, the taxpayers would help finance a fraction of the credit subsidies, but not pay to keep the systemically relevant financial institutions solvent.

Once the investors in the financial market realized that the systemically relevant financial institutions cannot become insolvent, the terrible mistrust that hampered lending in the current crisis could not arise. Lending would not freeze up. If it dropped significantly, it would be stimulated through the credit subsidies. The risks of financial contagion would fade away. We would have taken a big step towards ensuring that this type of financial crisis does not recur.


37. VOLKSWIRTSCHAFTLICHE TAGUNG
WENDEPUNKT KRISE:
WIRTSCHAFTSPOLITIK UNTER NEUEN VO

Podiumsdiskussion II:
Finanzmarktregulierung Neu: Wo hat die Politik versagt? Wo der Markt?

Panel II:
Rethinking Financial Regulation: Policy versus Market Failures

Martin Hellwig
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Market Failure or Government Failure? On the Causes of the Financial Crisis[1]

1 A Puzzle

For the media, the cause of the financial crisis is simple: Blind with greed, bank managers thought only about their bonuses and miscalculated badly in betting on *toxic* securities in the United States when the very label *subprime mortgages* should have alerted them to the fact that there was something wrong with these securities. Anybody who suggests that matters might be more complicated is denounced as a *homo exculpans,* a person who will excuse anything that managers do.[2]

If we look at the numbers, however, we see that there is something more to be explained. According to the Global Financial Stability Report of the International Monetary Fund (IMF) of October 2008, losses on non-prime mortgage-backed securities in US residential real-estate amount to some USD 500 billion.[3] This figure is both too small and too large.

The figure is too small in the sense that losses of USD 500 billion by themselves cannot explain why the financial system worldwide, with total assets in banking institutions amounting to some USD 80 to 90 trillion, has been so devastated by the crisis. Around 1990, losses of savings and loans institutions in the United States were said to amount to some USD 600 to USD 800 billion. A decade later, losses on NASDAQ and on the New York Stock Exchange amounted to USD 1.6 trillion in the calendar year 2000, USD 1.4 trillion in the calendar year 2001, and again USD 2.7 trillion in the calendar year 2002. Neither episode caused a worldwide financial crisis.

The figure of USD 500 billion of losses on non-prime mortgage-backed securities is too large in the sense that it can hardly be explained by anticipations of losses in debt service and/or repossession proceeds from these securities. According to the IMF's Global Financial Stability Report, the volume of non-prime mortgages that have been securitized amounts to about USD 1.1 trillion. Losses of USD 500 billion would correspond to a loss rate of 45% on these mortgages. If the debtor's down payment amounted to 5%, a loss rate of 45% on the mortgage would correspond to a depreciation of the property by more than 50%. In actual fact, residential-real-estate prices in the United States on average have declined by 19% from their peak in the summer of 2006 to the summer of 2008; across metropolitan areas, the maximum for this period was just below 33% (Phoenix, Tampa, Miami). To be sure, this *back-of-the-envelope* calculation neglects correlations; it also neglects the possibility that the decline of real-estate prices is still going on. However, this calculation also neglects the fact that, in actual fact, average down payment rates were 6% for subprime and 12% for "Alt-A", or near-prime, mortgages, and that about two thirds of these mortgages had been granted before

[1] *Paper prepared for the Oesterreichische Nationalbank, May 2009. This paper relies heavily on the Jelle Zijlstra Lecture that I gave in Amsterdam on May 27, 2008, see Hellwig, Systemic Risk in the Financial Sector: An Analysis of the Subprime-Mortgage Financial Crisis, Jelle Zijlstra Lecture 6, Netherlands Institute for Advanced Study, Wassenaar 2008, also* www.coll.mpg.de/pdf_dat/2008_43online.pdf

[2] *Frankfurter Allgemeine Zeitung, October 27, 2008.*

[3] *In April 2009, the Global Financial Stability Report no longer provides separate numbers for securities backed by prime and securities backed by non-prime mortgages. For the aggregate, losses are given as USD 990 billion, as opposed to USD 580 billion in October 2008.*

2006, at times when real-estate prices were significantly below their subsequent peaks.

The IMF's loss estimates are not actually based on projections of debt service on subprime mortgages. They are based on market prices for mortgage-backed securities. In some cases, where markets are not functioning any more, they are based on guesses as to what market prices might be if the markets were functioning. The IMF itself points out that these prices may not be good indicators of the returns that can be expected if one is willing to hold these securities to maturity. According to the IMF, therefore, market prices at this point are not a good basis for taking for long-term, value-maximising decisions.

Under *Fair Value Accounting,* however, these market prices are used to value the securities in the banks' books. If, over the past year, banks have forever been *discovering* new losses, the reason is not that bankers have been too stupid to know or too devious to reveal what their losses really are. The reason is rather, that, week by week and month by month, market prices have been going down and the banks' losses have become ever larger as market participants have become ever less willing to hold these securities – or less able to hold them.

The financial crisis is not just a matter of excessive lending in subprime mortgages and excessive securitization. To understand the crisis, we need to look at *systemic interdependence,* i.e., the mechanisms by which the subprime-mortgage crisis spilled over into the rest of the financial system. If we do so, we find that there actually were three distinct ingredients to the crisis:

– Flaws in subprime mortgage lending and securitization
– Flaws in financial structures of financial intermediaries
– Flaws in financial-system architecture

The latter two are interrelated. They are the real reason why something as unimportant as subprime mortgage lending has brought down the global financial system.

2 The Securitization of Real-Estate Finance

Before I turn to the systemic issues, I briefly discuss the role of securitization itself. I begin with the proposition that, in principle, the securitization of real-estate loans is a good thing. It would be problematic if the crisis led us to throw the baby out with the bathwater and banned this financial innovation.

Many financial crises in the past have been associated with real-estate finance, from the crisis of US savings and loans institutions in the 1980s to the banking crises that hit the United States, Sweden, Switzerland, Japan and other countries in the late 1980s and early 1990s.

Real estate is problematic because investments are lumpy, economic lifetimes are long, and, in any advanced economy, the total volume outstanding is very large, in most OECD countries on the same order of magnitude as the aggregate net value of financial assets. The discrepancy between the economic lifetime of the typical house and the investment horizon of the typical saver is a source of risk, refinancing risk if the real-estate investment is financed by short-term borrowing, valuation risk if the real-estate investment is financed by long-term securities. These risks could be avoided if we chose to live in tents. If we are not willing to live in tents, we must accept the existence of these risks as a fact of life. The only question then is who should bear them.

The crises of the 1980s and 1990s suggest that neither financial interme-

diaries nor borrowers are in a good position to do so. The assumption of interest rate risk of mortgage finance – and the horrible incidence of this risk – had the effect that, as of 1980/81, about two thirds of savings and loans institutions in the United States were technically insolvent. This was the major reason for the disaster of these institutions in the 1980s. Given this experience, the 1980s saw the emergence of adjustable-rate mortgages as a device for shifting interest rate risks to borrowers. When interest rates reached another peak around 1990, lending institutions found that increases in mortgage rates under the given adjustment clauses could induce debtor default; moreover, at the high market rates of interest, property values were depressed. The attempt to shift interest rate risk to debtors had merely transformed a part of this risk into credit risk. This was an important factor in the various banking crises of the late 1980s and early 1990s.

If neither financial intermediaries nor borrowers are in a good position to bear the risks of maturity transformation in real-estate investment and finance, one must find a way to pass these risks on to third parties that are better able to bear these risks. Such a third party might be a life insurance company or a pension fund. Because these institutions have liabilities with very long maturities, short-term fluctuations in refinancing conditions of the market prices of assets should matter much less for them than for depository institutions.

It also makes sense for some of the risks of real-estate finance in one country to be passed on to financial institutions worldwide. Such sharing of risks by many institutions in many countries improves the overall risk allocation by providing for greater diversification of risks for each institution. Public discussion of the losses of European banks in the crisis often carries a populist undertone that a decent bank should invest its funds at home rather than abroad. To some extent, this may involve the notion that a bank has better information about the risks that it is incurring if it invests at home. Whether this is actually the case, is a matter of dispute; this notion may well be the result of overconfidence bred by familiarity. However, any regulation requiring "our" banks to lend to "our" firms would leave the banks seriously underdiversified. Such non-diversified domestic lending, in particular real-estate lending, actually played a major role in the banking crises of the late 1980s and early 1990s, e.g., in the Texan savings-and-loans crisis of 1986, which was largely due to state regulation requiring these institutions to limit their real-estate lending to properties in Texas and thereby exposing them to the effects of the oil price decline of 1985 on the Texan economy and Texan real estate markets.

Securitization of real-estate finance makes sense as a way to provide for such transfers and sharing of risks. The operations of *packaging* and *tranching* that are associated with securitization also make good economic sense. By

putting many different mortgages into one package that serves as collateral for a mortgage-backed security, one makes the mortgage-backed security somewhat independent of the risks that are

specific to any mortgage and any property. The standardization of securities that is thereby achieved provides for their marketability. With packages rather than single mortgages serving as collateral, there are likely to be fewer information asymmetries between buyers and sellers of these securities.

Tranching, i.e., the issuance of different kinds of debt securities with different priority rankings and equity as the first loss absorber, can in principle reduce adverse incentive effects from securitization. The probability distribution of losses from a portfolio of stochastically independent loans tends to be highly skewed; losses above 10% are exceedingly unlikely. Debt titles with claims of up to 90% of the returns on the portfolio may then be deemed as very safe. Credit risks on the underlying real-estate loans affect mainly the equity tranche. If the equity tranche goes back to the bank that initiated the mortgages, this bank has an incentive to use proper care in its creditworthiness assessments. If instead the equity tranche is retained by the securitizing bank, this institution will impose minimum standards on the mortgages it acquires from the initiating banks.[4]

When mortgage securitization was developed in the United States, the initiating banks were *not* made liable for the credit risks of the mortgages they issued. This omission initially did not make much of a difference. The securitization was carried out by *Fannie Mae* and *Freddie Mac*, the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation. These institutions *guaranteed* the debt service on the securities that they issued. At the same time, they imposed minimum standards for creditworthiness of the borrowers whose mortgage were to be taken into a mortgage portfolio for securitization; the term *prime mortgage* designates mortgages for which these minimum standards are fulfilled. Expected losses and market write-downs for prime mortgages and prime-mortgage-backed securities were actually negligible until quite recently. The losses that have occurred by now must be deemed a consequence, rather than an initial cause of the crisis.

Because Fannie Mae had originally been a government institution and, along with Freddie Mac, they still held a privileged position with the US Treasury, many investors believed that these *government sponsored enterprises* were backed by the government even though, in fact, they had been privatized long ago, and there was no explicit government guarantee. Given this belief, the debt service guarantees that they provided made mortgage-backed securities appear to be very safe.

[4] *An example for this sort of arrangement is provided by the German Pfandbrief, a security that is backed by a portfolio of mortgages, where the issuing bank retains full liability for the promised debt service.*

In the early 2000s, private investment banks discovered that debt securitization held great promises as a new line of business and aggressively moved into this field. As they did so, they introduced two important changes:

– Unlike Fannie and Freddie they did *not* provide any debt service guarantees for the mortgage-backed securities that were issued under their auspices, usually through special purpose vehicles that had been created for just this purpose.
– Moreover, they concentrated on mortgages that did *not* fulfil the quality requirements of Fannie Mae and Freddie Mac, the so-called *subprime* mortgages. In particular, they did not impose lower bounds on down payment rates or upper bounds on debt service to income ratios. Even for consumer credit scores, their standards were below those of Fannie and Freddie.

In these developments, no attention seems to have been paid to the fact that, with the displacement of Fannie and Freddie by the private investment banks and with the expansion mortgage lending and securitization from prime mortgages to subprime mortgages, there was no more check against a deterioration of borrower creditworthiness. The standards used for assessing subprime mortgages were easier to manipulate than the standards for prime mortgages, the private investment banks shunned the sort of liability that Fannie and Freddie had borne, and the initiating mortgage banks never had any liability at all. I suspect that this oversight was partly due to the fact that, by the time the private investment banks entered the field, securitization was seen as an investment banking activity and, cultural differences between investment bankers and loan officers being what they are, investment bankers have about as much of a feeling for credit risk as loan officers have for risks in market pricing.

3 The Emergence of the Subprime Bubble between 2003 and 2006/07

From 2003 to 2006 the securitization activities of private investment banks in the area of *subprime mortgages* grew dramatically. By 2006, more than 40% of newly granted mortgages belonged to this category, as opposed to 9% in 2000; the share of subprime mortgages in the stock of outstanding mortgages had risen from 7% in 2000 to 14% in 2006.

During these years, there was a steady decline in mortgage quality. Some of this is evident in observable variables such as down-payment rates or debt service to income ratios. However, econometric studies of delinquencies suggest that the quality decline also concerned unobservable variables; conditional on all observable variables, delinquency rates twelve months after the conclusion of mortgage contracts rose steadily from 2001 to 2006. However, in 2004 and 2005, this reduction in borrower quality was concealed because increases in real-estate prices induced borrowers' equity shares to rise after the mortgage contract had been concluded.

After a period of stagnation in the 1990s, real-estate prices in the United States had increased by about 9% per year from 1999 to 2003, then by almost 14% from 2003 to 2004 and by almost 16% from 2004 to 2005. It is probably not a coincidence that the jump in the rate of real-estate appreciation in 2003 occurred at the very time when the private investment banks began to move aggressively into the mortgage securitization business.

It is probably also not a coincidence that this expansion occurred at a time when monetary policy in the United States was very loose and the yield curve was very steep. From 2002 to 2004, interest rates in US money markets were significantly below 2%, as opposed to 6% in 2000 and 4% in 2001. Long-term interest rates had also fallen, but much less than short-term rates: The interest rate for ten-year Treasuries fell from around 6% in 2000 to just over 4% between 2003 and 2005, the mortgage rate for fixed-rate *prime* mortgages fell from around 8% in the year 2000 to just under 6% p.a. between 2003 and 2005. The excess of this mortgage rate over the interest rate in the money market thus moved from 200 basis points (2 percentage points) in 2000 to over 400 basis points (4 percentage points) between 2003 and 2004.

The *risk premium* for fixed-rate *subprime* mortgages had been at 300 base points in 2001 and fell to 100 base points in 2004. This decline in the risk premium for subprime mortgages is all the more remarkable because, as mentioned above, it coincided with a decline in the quality of subprime-mortgage borrowers.[5] At the same time, there was no comparable decline in the risk premia for lower-rated corporate bonds.

These observations suggest that the entire development was supply-driven rather than demand-driven. The aggressive move of private investment banks into the business of securitizing subprime mortgages contributed to the lowering of risk premia even without any general change in risk appetites. Investors in search of high yields were happy to make more and more funds available for housing finance in the subprime segment of the market. These investors did not impose any *market discipline,* i.e., quality standards that would have forced the securitizing investment banks and the initiating mortgage banks to address the problem of creditworthiness of the final borrowers.

Who were these investors? Three groups are of particular interest:

– Most equity tranches ended up with hedge funds and investment banks that were hungry for high yields, as the phrase went. Little thought seems to have been given to the implications of the marketing of equity tranches on the originating and/or the securitizing institutions' incentives.
– The so-called *mezzanine tranches*, subordinated-debt tranches, were being acquired by investment banks that wanted to use them as collateral in a second round of securitization, creating the so-called MBS CDOs, Collateralized Debt Obligations that were backed by Mortgage-Backed Securities. In this second round of securitization, debt securities with different priority rankings and equity as a first loss absorber would be issued against a portfolio of (mezzanine) mortgage-backed securities. One purpose of this operation was to obtain additional funds even for subordinated-debt tranches of mortgage-backed securities: If the credit risks in, say a portfolio of BBB-rated mezzanine securities were deemed to be sufficiently independent, the *super-senior tranche,* i.e., the debt with the highest priority ranking against this portfolio, might be given a AAA rating and might thereby be eligible

[5] *The number of cases of fraud in connection with new mortgages grew fivefold from 1996 to 2005; in 2003 the growth rate was 77%, in 2004 it was 93%.*

for inclusion in the portfolios of institutional investors, like certain insurers, that were required to invest only in AAA-rated securities. European banks, whose access to the initiating mortgage banks was worse than that of their American counterparts, were particularly active in this second round of securitization, which they saw as an opportunity to get a share of the action.

– Many of the securities that were produced by the different rounds of securitization were acquired by special entities, so-called conduits and structured investment vehicles (SIVs), which banks in Europe as well as the United States were using to acquire and hold such securities without having to back them up with equity capital. These special entities had virtually no equity capital of their own. Moreover, they financed themselves by issuing asset-backed commercial papers, debt securities with maturities of one year or less.

Remarkably, the different participants seem to have been entirely focussed on yields, apparently without paying much attention to risks. Questions about incentives and liabilities in origination and securitization did not receive much attention. The rating agencies' assessments of the different securities were not questioned. Indeed, there seems to have been no concern that ratings of AAA on different securities must mean different things if the interest rates on these securities differed by fifty or so basis points.

The assessments of mortgage-backed securities by the rating agencies were fundamentally flawed. They seem to have assumed that problems of borrower creditworthiness would be defused by continued increases in real-estate prices, which would raise the borrowers' stakes in their properties and improve the protection that these properties were providing as collateral for the lenders. In assuming that real-estate prices would continue to rise, they failed to see that some of the reasons for the increases that had occurred, in particular the lowering of interest rates from 2000 to 2003 and the inflow of funds into these markets that was due to the development of subprime-mortgage securitization, were one-time changes that would not be repeated, and that, therefore, an extrapolation from past and current real-estate price increases into the future was unjustified.

The agencies also seem to have neglected the correlations of credit risks that were caused by the dependence of all mortgage contracts on common factors such as changes in market rate of interest and changes in real-estate prices. Neglect of correlations is the

only reason I can see for why, in the assessment of MBS CDOs, they would have given an AAA rating to the super-senior tranche on a package of BBB-rated mezzanine securities. However, correlations came into play when interest rates again began to rise and real-estate prices began to fall.

4 The Onset of the Crisis

Beginning in 2005, US monetary policy became more restrictive, with some caution at first and then very strongly, so that interest rates in US money markets moved back to around 5% in 2006 and 2007. Real-estate prices continued

to rise from 2005 to 2006, albeit at a slower rate of 7.5%; in the summer of 2006, they began to fall, first slowly, at 3.6% from 2006 to 2007 and then at 15.3% from the summer of 2007 to the summer of 2008.

When real-estate prices began to fall, delinquency rates increased dramatically. The impending difficulties in subprime mortgages and mortgage-backed securities were quickly recognized, but, prior to August 2007, hardly anybody appreciated the implications for the overall financial system. In April 2007, the Global Financial Stability Report of the International Monetary Fund provided a detailed description of the crisis in subprime-mortgages and subprime-mortgage-backed securities, but ended with an assessment that the crisis was unlikely to spread to other parts of the financial system. In June 2007, the Annual Report of the Bank for International Settlements provided a similar assessment.

In August 2007, however, the crisis of subprime mortgages and subprime mortgage-backed securities did turn into an international financial crisis. The triggering event was the downgrading of a large set of mortgage-backed securities by the rating agencies, some of them by three grades at once, something that was almost unheard of for corporate bonds. This downgrading had an immediate impact on the market prices of these securities. Even more importantly, it made market participants wake up to the fact that these securities were much less safe than had been thought to be, not just in terms of the underlying credit risk but also in terms of market risk associated with the downgrading and the system's reaction to this downgrading.

This first surprise was almost immediately followed by a second surprise. Price declines for mortgage-backed securities caused losses at institutions holding them. For some institutions, these losses immediately created solvency and refinancing problems. Hardest hit were some hedge funds and the *conduits* and *structured investment vehicles* (SIVs that European and American banks had used as instruments to invest in mortgage-backed securities without having these investments count towards statutory capital requirements. These entities had practically no equity capital; they invested in asset-backed securities and refinanced themselves by issuing commercial paper. Given the absence of equity, the initial price declines of mortgage-backed securities caused these entities to become effectively insolvent; as a result, they could no longer refinance themselves on the commercial paper market and had to call in the liquidity assistance promises that they had received from the sponsoring banks. Not all of these promises were honoured, however. Moreover, given the losses that had already occurred, some of

these promises exceeded the sponsoring banks' own capacities to absorb losses. The liquidity assistance promises of Sächsische Landesbank to its conduits, for instance, amounted to more than ten times the bank's equity!

Whereas the existence and use of conduits and SIVs had always been known, hardly anybody had appreciated the scope of their activities. *Ex post*, their holdings of asset-backed securities have been estimated at USD 1 trillion as of July 2007, equal to almost the total outstanding volume of securitized subprime mortgages (USD 1.1 trillion) and over 17% of the volume of all securitized residential mortgages in the United States. The information that such a large part of the outstanding volume of mortgage-backed securities had been financed by issuing short-term commercial paper and that this refinancing mode was no longer available very much magnified the impact of the drastic downgrading of mortgage-backed securities by the rating agencies.

The surprises that had just been experienced contributed to an atmosphere of mutual mistrust. The solvency problems of conduits and SIVs and of the banks that had sponsored them raised the question of who else might be involved. As a result of such mistrust, interbank lending was much reduced; indeed, from August 2007 to September 2008, there were already several instances when interbank markets stopped operating altogether, and central banks were the only institutions providing liquidity.

Given this mistrust of investors, institutions like investment banks and money market funds that had been used to refinancing themselves by short-term securities now had to make provisions for the event that their financiers might cease funding them. Money market funds did so by moving out of commercial paper and into government securities, from cash to short-term Treasuries; investment banks also tried to shift from less liquid to more liquid assets. This left little room for buying mortgage-backed securities, even though the prices of these securities might have dropped much more than the discounted present values of expected debt service on the underlying mortgages.

5 Dynamics of the Crisis

In the atmosphere of apprehensiveness and mistrust that resulted from the twin surprises of August 2007,[6] the international financial system has inexorably moved in a downward spiral. At times, the spiral has been slowed down by central banks providing liquidity to the system. However, the central banks were not able to remove fears about refinancing and doubts about the solvency of prospective borrowers. As long as solvency was an issue, there was no prospect of the spiral ending. Indeed, the downward spiral itself contributed to deepening concerns about solvency – until the insolvency of Lehman Brothers showed that such concerns had a material basis in fact and interbank markets broke down altogether. It remains to be seen whether the subsidies and guarantees that governments in the United States and Europe have provided after the Lehman fiasco will eventually eliminate the prevailing doubts about the viability of financial institutions.

[6] *I am treating the breakdown of maturity transformation by conduits and structured investment vehicles (SIVs) as an „independent" surprise. While this breakdown was triggered by the downgrades of subprime-mortgage-backed securities, financing structures of these institutions were so unhealthy that some other shock, e.g., a general increase in interest rates, would have had the same effect.*

The downward dynamics have been driven by the interplay of the following factors:

Market Malfunctioning: The prices of many asset-backed securities have gone down much more than expectations of future debt service or foreclosure proceeds would seem to warrant. This explains the discrepancy, mentioned in the introduction, between the IMF's October 2008 estimate of USD 500 billion of losses non-prime mortgage-backed securities and the losses that would have been anticipated on the basis of actual developments in real-estate markets. There are few buyers for these securities, and some markets have become inactive altogether. Even where markets have remained active, following the twin surprises of August 2007, maturity premia and risk premia have risen and prices have declined dramatically. The lack of buyers is due partly to investors feeling too weak to take on new commitments, partly to their expecting the price declines to continue, and partly to their being afraid of adverse selection. Akerlof's *lemons* problem, whereby, in the presence of asymmetric information about quality, the average quality that is put up for sale is worse than the average quality outstanding, is relevant for used securities as well as used cars.[7]

Accounting Rules: Many financial institutions have treated asset-backed securities as market risks, rather than credit risks, because this allows them to determine capital requirements on the basis of their own internal models. For these risks, they must follow the principle of *mark-to-market or fair value accounting*. Declines in market values must immediately enter the banks' financial statements. In cases where markets have ceased to function, the banks must use estimates of what the market prices would be if the markets did function.[8] To the extent that market prices are deemed to provide measures of value that are more *objective,* less at the discretion of the banker than the assessment of credit risks, this difference may be seen as an advantage of fair value accounting over traditional accounting for credit risks.[9] However, if market prices are driven by panic and fears of a liquidity shortage, fair value accounting may be providing the bank with the wrong signals on which to base its strategy.

Insufficiency of "free" equity capital: In their quest for high rates of return on equity, many banking institutions had greatly expanded their operations relative to their equity base. They had little or no equity in excess of regulatory requirements. Fair value accounting and regulatory requirements being what they are, losses from declines in the market prices of assets required the banks to react immediately, either by recapitalizing or by *deleveraging*, i.e., by selling assets. By deleveraging, they put additional pressure on asset markets and on other institutions

[7] *This problem is also plaguing the various toxic-asset purchase programs by which governments are trying to relieve banks of these securities.*

[8] *This requirement has only recently been abandoned.*

[9] *Thus, for a long time in the 1990s, Japanese banks did not write down their loan portfolios even when it was clear that many of the loans in these portfolios were bad; this failure to acknowledge losses delayed the cleanup of the crisis and thus contributed to the prolonged recession in Japan. In the early 1980s, US savings and loans institutions kept long-term, fixed-interest mortgages at face value in their books, even though, at the double-digit market rates of interest, the discounted present values of debt service on these mortgages were much lower. Thereby they concealed the fact that they were technically insolvent and gave themselves the opportunity to "gamble for resurrection", with the consequence that the cleanup after 1990 was much costlier than a cleanup in 1981 would have been.*

that were faced with further price declines.

Insufficiency of regulatory capital: Banks were also economizing on regulatory capital. Using the model-based approach to determine regulatory capital for market risks, some of the most sophisticated institutions had managed to reduce their equity to a small fraction of the balance sheet, in the case of UBS some 40 billion on a balance sheet of some 1600 billion Swiss francs. At such low levels, it does not take much of an asset price decline to raise doubts about solvency. Even if solvency is not of an issue, deleveraging needs are likely to be quite drastic.

It is important to appreciate the role of capital requirements in the downward spiral. Whereas past studies had discussed pro-cyclical effects of capital regulation in terms of macroeconomic *flows* of aggregate demand, corporate revenues, corporate borrowers' debt service, bank profits, new loans and aggregate corporate investment, in this crisis, we have seen pro-cyclical effects of capital regulation on stocks of assets and liabilities in the bank balance sheets. Asset prices declines that induce write-downs automatically eat into the banks' capital. Under a mechanical regime of capital regulation, the bank is forced to sell asset, possibly even to realize book losses that are not matched by losses in the present values of future returns on the securities in question. The bank's asset sales induce further declines in asset prices and put additional pressure on other banks.

Financial developments since August 2007 have been driven by the interplay of price declines in malfunctioning markets, fair-value accounting, capital requirements, and deleveraging. At times, the downward movement has accelerated, sometimes because individual banks ran into trouble, sometimes because, once again, interbank markets broke down. On these occasions, liquidity assistance from central banks, to individual institutions or to the market as a whole, has brought some relief, but was unable to stop the downward movement as such. Whenever market participants and the media proclaimed that the worst of the crisis was over, the next problem would appear on the horizon.

At last, the insolvency of Lehman Brothers had such repercussions for other institutions (AIG) and for asset markets worldwide that governments in the United States and Europe and, ultimately, the taxpayers have become involved. We can only hope that this government involvement will eventually stop the downward spiral and to help rebuild confidence among the actors in the financial system.

This is by no means certain, however. For the immediate future, we must fear the feedback effects from the recession of the real economy on the financial sector. At least in Europe, the crisis did not hit the real economy until the last quarter of 2008. The downturn that we have experienced since then has been more radical than any downturn since 1945. If past experience is anything to go by, we must expect this downturn to lead to a sharp deteriora-

tion in the performance of outstanding loans from banks to firms. Problems with debt service will require further write-downs, now on loans, rather than securities. Such write-downs will put additional pressure on bank equity.

Under the rules of Basel II, banks will have to assess the effects of the re-

cession on the creditworthiness of all their loan clients, including those that continue to fulfil their obligations. Such reassessments may require further write-downs; even when no write-down occurs, under Basel II, any notion that a client's creditworthiness is lowered by the recession requires the bank to hold more equity against the loan in question.

With little scope for recapitalization, the additional pressure on bank equity is likely to trigger another wave of deleveraging. As Basel II enhances the pressure on bank equity, it reinforces the downward spiral of the financial system and the real economy.

In the introduction, I asked why the (expected) losses from subprime-mortgage lending have disrupted the global financial system. The answer to this question lies in the interconnectedness of the system and in the interplay of the factors that I have described. Because of these systemic interactions, the twin surprises of August 2007 induced a gradual implosion of markets, prices and institutions that even the central banks' interventions could not bring to a stop.

6 Whose Fault Was It? Individual Misbehaviour

In assessing these developments, it is important to distinguish between individual misbehaviour and faulty system design. *Individual misbehavior* involves choices that end up harming the individual or institution that have taken them. By this, I do not mean choices that turned out badly *ex post* because of bad luck, but choices whose flaws should have been obvious *ex ante*. *Faulty system design* involves institutional arrangements and regulatory rules that lead to undesirable results, for the institutions that are involved or even the financial system as a whole, when individuals pursuing their own interests are subjected to these arrangements and rules. The question of who was responsible arises for flaws in system design as for individual misbehaviour, but it arises at another level, the level of regulatory design rather than any specific actions.

By this logic, the insufficiency of creditworthiness assessments by originating banks in subprime lending would be deemed to be a matter of faulty system design rather than individual misbehavior. Because the originate-and-distribute system of mortgage securitization had been designed so that the originating banks had no liability, these banks had no reason to spend more than a minimum of resources on creditworthiness assessments. The fact that they had no liability, however, was an instance of faulty system design.

As the genesis and the evolution of the crisis have been described above, the following instances of misbehaviour seem to have played a role:

- Investment bankers focussing on growth and market shares in securitization ignored risks. To be sure, once they sold the securities they would no longer be liable. However, in the crisis, the losses just from *warehousing* securities in the process of securitization turned out to be enormous.
- All sorts of investors, individuals, private universities, foundations, German public banks, American and Swiss investment banks were so much concerned about yields that they neglected the associated risks and failed to ask why a mortgage-backed security with a rating of AAA was paying more interest than a corporate bond with the same rating.
- These investors also failed to think through the implications of liability rules for incentives in origination and securitization.
- Risk control and risk management in the large investment banks that were involved in securitization and/or holding mortgage-backed securities failed to provide comprehensive analyses of their institutions' risk exposures from these securities, taking into account the joint dependence of securitization as a business and of the returns on securities held on the movements of residential real-estate prices in the United States and on the factors that were driving these movements.
- To the extent that credit risks were hedged, risk control and risk management did not pay attention to the possibility that, because these risks were highly correlated, their counterparties, monoline insurers or institutions like AIG, might go under at the very time when they would be called upon to substitute for the defaulting borrowers.
- The *rating agencies* also failed to develop an adequate, comprehensive and timely understanding of the relevant risks and the correlations between these risks taking into account their joint dependence on movements in underlying factors.
- *Conduits* and *SIV*s were engaging in excessive maturity transformation. Not having any equity worth mentioning, investing in long-term assets, and refinancing through the money market would be a sure recipe for disaster even if the long-term assets were not subject to credit risk but *only* to interest rate risk. The risks of such maturity transformation should have been known to any professional banker.
- By the same token, the risks that the pledges of liquidity assistance to *conduits* and *SIV*s imposed on the sponsoring banks should have been obvious to any professional banker.
- Regulators and politicians must take the blame for allowing significant loopholes in banking regulation. If conduits and SIVs were treated as parts of the sponsoring banks, they should have been on the banks' balance sheets from the beginning. If they were treated as independent market participants, the sponsoring banks' pledges of liquidity assistance should have been subjected to large-exposure regulation. Excuses of the sort that large-exposure regulation does not apply to promises with maturities below 365 days are ridiculous.
- Finally, mention must be made of the looseness of monetary policy in the years 2002 to 2004. The low money market rates and steep yield curves that the USA had in these years made borrowing short to lend long appear to be very attractive and contributed to the push of US

investment banks into the business of securitizing subprime mortgages. The Federal Reserve Bank should have known that this constellation was bound to make the financial system vulnerable, so that a reversal of monetary policy would be difficult to achieve without endangering financial institutions. After all, this is what happened when the liquidity flush of 1988 was followed by the restrictiveness of 1989 and when the expansionary policy of the years after 1990 was ended in 1994.

7 Flaws in System Design

The following *flaws in system design* were also important:

- The decline in the quality of subprime mortgages was at least partly caused by a lack of incentives for originating mortgage banks to spend resources on creditworthiness assessments. Incentives were missing because (i) the originating banks did not carry any liability and (ii) the securitizing private investment banks – unlike Fannie Mae and Freddie Mac – did not impose strong quality standards of their own.
- The failure of the securitizing private investment banks to impose strong quality standards of their own was due to their not being liable either – unlike Fannie Mae and Freddie Mac. Their failure to provide guarantees was possible because hedge funds were willing to buy up equity tranches – presumably satisfying the demands of final investors hungry for yields.
- The failure of the securitizing investment banks to impose strong quality standards was also supported by the willingness of other investment banks to buy up mezzanine securities for a second round of securitization (MBS CDOs). Apparently, these other investment banks cared more about market shares in the securitization business than about the credit risks in mezzanine securities. Incentives for investment banks in the second round of securitization to impose quality standards were just as deficient as for investment banks in the first round of securitization. For the economist, it is not evident that the second and higher rounds of securitization served any useful purpose – except of course, to get additional AAA ratings so as to attract additional investors that were required by regulation to invest only in AAA-rated securities.
- The absence of any regulation or supervision for *conduits* and *SIV*s and for their relations with the sponsoring banks implied that the extent of maturity transformation by these institutions was by and large unknown. When this became known in August 2007, it contributed greatly to the shock, perhaps even more than the unexpectedly large downgrading of the subprime-mortgage-backed securities as such.
- Private-sector banks had significant governance problems. Internally, they were unable to subject their investment bankers to effective risk control. Externally, in relations with shareholders, analysts, and the media, the mechanisms that support *market discipline* in order to enhance *shareholder value* were biased towards yields with little concern for risk. When Deutsche Bank was claiming that a 25% rate of return on equity was the *benchmark* for modern banking institutions, it raised protests among labor unions militating against layoffs, but not by financial analysts suggesting that

this benchmark might be an indication of undercapitalization and demanding that the bank provide information about the risks associated with this benchmark. Moreover, the mechanisms that support *market discipline* in order to enhance *shareholder value* do not pay much attention to risks that will be borne by others than shareholders, i.e., the banks' creditors or the taxpayer when he is called upon to save the bank.

– German public banks had even greater governance problems. Whereas private investors and banks may have been suffering from yield mania, these public banks were caught up in a *yield panic*. When interest rates and intermediation margins are low, and you do not have much of an established business model, when the implicit public subsidies that you used to get in the past have just been outlawed by the European Commission, where do you get the returns you need in order to cover your operating costs and to satisfy the demands of the politicians? For these banks, mortgage-backed securities looked like a god-sent remedy, especially when refinanced at 1% in the American money market. For the politicians sitting in these banks' supervisory committees, ….
– The portfolio managers and risk managers of institutional investors cannot be blamed for not having taken into consideration the system risk exposure that was created by maturity transformation in *conduits* and *structured investment vehicles* (*SIV*s). After all, they did not and could not know the extent of this maturity transformation. They can be blamed, however, for not having paid enough attention to the possibility that there might be a major risk that their risk models had not captured. I see this as a problem of system design rather than any specific misbehaviour. Common experience suggests that there are always matters outside one's horizon of analysis; any system of risk management must address such eventualities and consider how to make provisions for them.
– The preceding point concerns the system of banking regulation as well as the system of risk management at the level of the individual bank. When they allowed the banks to determine their regulatory capital for market risks exclusively on the basis of their own quantitative risk models, the regulators – like the bank managers – neglected the possibility that important risks might not have been captured by the models.

– The very mechanical approach to capital regulation that we have under the Basel Accord has greatly contributed to the interplay between malfunctioning markets, fair value accounting, capital requirements, and deleveraging that has driven the implosion of the system since August 2007. If overall capital requirements had been higher,

the multipliers would have been smaller. If the application of the regulation would have left more scope for discretion with respect to the speed of deleveraging, the systemic impact of the regulation would have been cushioned even more.

– Banking regulation and supervision must be criticized for their lack of systemic thinking. They tend to think about the solvency of the individual institution and the protection of its investors in isolation. Yet, the survival of the institution also depends on its systemic environment. The fact that hedge funds, *conduits* etc. were not subject to any reporting requirements makes sense if we think about these institutions in isolation and consider their investors to be sophisticated enough and important enough to fend for themselves. It does not make sense if we think in systemic terms about the roles of these institutions as counterparties in the securitization business or about the impact of their failure on asset prices and all the institutions that are thereby affected. Deleveraging, i.e., the sale of assets after a loss, can make sense as a way of adapting the bank's risk exposure to its reduced equity,[10] but it is counterproductive if the induced decline in asset prices requires other banks to deleverage as well, with additional price effects that hit right back at the first bank.

8 Market Failure or Government Failure? National-Champions and Regulatory Capture

In thinking about what went wrong, it is misleading to think merely in terms of market failure or government failure. Some of the most important flaws in the design of the financial system have been the result of interactions between market participants, regulators, and politicians. The evolution of the current regime of banking regulation provides a case in point.

Following a period of deregulation, from the mid-1970s to the mid-1980s, in the second half of the 1980s, the Basel Committee on Banking Supervision began to think about international harmonization of banking regulation, in particular, the regulation of bank capital, where harmonization is not obviously nonsensical (as would be the case for the regulation of deposit rates or asset allocation rules, the regulatory instruments of yesteryear). The result was the 1988 Basel Accord providing for an 8% capital requirement for credit risks. The industry was somewhat taken by surprise. In 1993, however, when the Basel Committee came up with a proposal to extend the Basel Accord to market risks, the industry was better prepared. It quickly ridiculed the proposal (now known as the *standard approach*) for its coarseness

[10] *Even here, there is a possibility that the realization of losses through a fire sale in a malfunctioning market may destroy the viability of the bank in the medium run.*

and its lack of calibration of capital requirements to differences in the risks of the different assets. By contrast, the industry's own techniques of risk management and risk control were said to be much more advanced so that the Basel Committee's proposal would actual require the industry to reduce the quality of its risk management. Two years later, in 1995, the Basel Committee came up with a new proposal, which, according to the industry's wishes, allowed for the model-based approach as an alternative way of determining capital requirements. This new proposal was quickly enacted in the 1996 Amendment to the Basel Accord.

This regulatory capture by sophistication was made possible by a complete lack of conceptual foundation for the regulation in question. Capital, it is said, serves as a buffer. No mention is made of the fact that only *free* capital serves as a buffer; required capital is needed to satisfy requirements and cannot therefore serve as a buffer. Nor is any mention made of the fact that deleveraging induced by the interdependence of interim losses and capital requirements has negative effects on market prices and on other institutions. Systemic effects lie outside the horizon of a regulator who believes that, if he is safeguarding the solvency of each institution, then he is also safeguarding the system. No attention is paid to the fact that, because of correlations between underlying and counterparty risks or because of parallel exposures of different institutions to the same underlying risk, key elements of the individual institutions risk exposure cannot be assessed let alone measured. Nor has any attention been paid to the question of how to handle the dynamics of adjustment after interim losses that reduce the institution's equity.

In discussions about Basel II, I regularly hear: Surely you must agree that the kind of fine-tuning in assessing credit risks is great progress over Basel I (the 1988 Accord)?! This kind of question cannot actually be answered unless one knows what the purpose of the regulation is. On this, I have never seen a coherent account. The regulators talk about a buffer. Academic economists tend to talk about capital as an incentive device, reducing the banks' incentives to gamble. Yet a third objective might be to give the supervisor a breathing space in which to intervene, to take corrective actions, before the bank is taken over by a bankruptcy court. This third objective would not call for any risk calibration of capital requirement at all. It would call for a regime that is safe from manipulations aiming at delaying the regulator's intervention. It might also call for a calibration of capital requirements according to differences in the ease of disposing of assets as the supervisor intervenes prior to insolvency. If this is the purpose of the regulation, we should need something quite different from what we have today.

As matters stand, however, we should acknowledge that the regime of capital regulation that we have today has materially contributed to the crisis, first in allowing banks to have extremely low regulatory capital and second in greatly contributing to the downward spiral since August 2007. We should also acknowledge that the introduction of this regime in the 1990s has taken place not only without conceptual foundation, but also without

any theoretical or empirical analysis of what its effects might actually be.[11]

To be sure, capital requirements are not the only piece of banking regulation that we have. There are also the second and third pillars of Basel II, concerning the professionalism of the bank's management and market discipline. But why did the supervisors not make more use of the powers they have under the second pillar in order to disallow some of the practices that were obviously deleterious? And why did the supervisors not put more pressure on banks to check the assumption about correlations in their models and to think about whether their capital would also be able to deal with risks that were not in the models?

If one asks a supervisor this question, he will answer that the banks would have protested and the politicians and the media would not have allowed it. In the good years, as things seemed to be going well, nobody wanted to put sand into the wheels and risk stopping the party. Concerns for the competitive positions of national champions in international market played an important role. The fact that there is a difference between the public interest and the private interests of a bank, a difference between concerns about risk from the public perspective and the perspective of private players, seems to have been lost.

In my view, we should be less concerned about the respective roles of market failures and government failures in the crisis and more concerned with why, in the decade prior to the crisis, there were too few voices, in the public sector as well as the industry itself, that acknowledged the difference between private and public interests and that questioned the risk implications of current regulation and current business strategies. Arranging the system so as to make room for such concerns being voiced may be the most important task for regulatory reform.

At this point, most politicians seem to be agreed that financial supervision must be expanded and strengthened. However, there are few signs indicating that the politicians appreciate the extent to which not just the lack of supervision over hedge funds, conduits and SIVs, but also the very mechanics of the system that is imposed on banks has contributed to the financial crisis. If we are to prevent a recurrence of such a systemic implosion, we need to address this problem as well. For this purpose, the conceptual foundations of banking regulation and supervision must be altogether reconsidered.

[11] *Compare the procedure leading to the 1996 Amendment to the Basel Accord to the effort that a pharmaceutical company must undertake to get approval for the introduction of a new drug.*

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Dealing with Systemic Risk: "Liquidity Insurance for Systemic Crises"[1]

The financial crisis that started in the summer of 2007 has its roots in a big collective mistake: the under-estimation of systemic risk. This mistake has two important dimensions. A first dimension is the absence of a macro-prudential view in the design and practice of financial regulation and economic policy (especially monetary policy, but possibly also the fiscal and exchange rate policies that helped sustain global imbalances). A second dimension is the excessively optimistic judgment of the process of securitization and the supposed virtues of the originate-to-distribute (OTD) model of banking.

This second dimension of the mistake was partly sustained by the lack of data and historical experience with the OTD model, as well as by the general acceptance of naïve extrapolations of financial theory, regarding the virtues of diversification and greater market completeness. Potential asymmetric information and agency problems were overlooked, ignoring many of the insights provided by the academic corporate finance and banking literatures over the last thirty years.

The risks associated with in the OTD model of banking, including the risks due to maturity mismatch, were at least as important as those present in the traditional domestically-oriented banking systems of the old days. However, due in part to the effective lack of transparency of the OTD model, its greater complexity and interconnectedness, and the lack of precautions resulting from both ignorance and negligence, these risks were poorly measured, poorly understood, and much more dangerous.

A truth evidenced by the crisis (but denied by many before its outburst) is that short-term wholesale liabilities constitute, in practice, a less stable source of funds for banks than retail deposits. This lower stability comes partly from the fact that banks' non-deposit short-term debt lacks an arrangement similar to deposit insurance. Deposit insurance protects the financial system against traditional deposit runs by reassuring the depositors about the value of their deposits when there are rumors about the likely insolvency of their banks. Short-term wholesale creditors did not get similar reassurances until very late in this crisis.

The news about the US housing losses around the summer of 2007 and the perception that these losses could spread in an unpredictable way throughout a system of interconnected global banks produced a modern form of global bank panic among money market investors. For the banks that relied on international money markets for their funding, liquidity problems became immediately obvious. Many other banks suffered second round effects, after being hit by direct losses, fire sales, asset price declines, higher margin calls, and costly deleveraging processes, all of which were part of intertwined downward spirals observed during the buildup of this great crisis (Brunnermeier, 2009).

The presumption that money markets without explicit government support were liquid (and a good source of

[1] *This short paper summarizes a panel statement at the 37th Economics Conference of the Oesterreichische Nationalbank, "Beyond the Crisis: Economic Policy in a New Macroeconomic Environment". The contents is based on joint work with Enrico Perotti, from the University of Amsterdam.*

market discipline for banks) was fundamentally wrong. Once this was recognized, probably too late, by the authorities, governments went massively to the rescue, causing concern and scandal on ample groups of the public opinion, hostile to the idea of using tax-payers money to assist the institutions blamed for the crisis.

The day-to-day management of the crisis then became accompanied by the need to urgently reconsider the regulation of the financial system. In addition to the short term need to calm the public with the announcement of a new financial architecture, the main goal in the current re-regulatory efforts is to correct some of the excesses perceived as causes of the crisis so as to, hopefully, minimize the risk and severity of a similar crisis in the future.

The challenges and alternatives for the design of the new financial architecture are manifold and providing a systematic review of them will exceed

the scope of this short paper. Some recent reports provide excellent summaries of the underlying trade-offs and the main alternatives (e.g. Brunnermeier et al., 2009, and the de Larosière Group, 2009). In this short paper I will focus on a subset of issues regarding the regulatory treatment of liquidity risk and the institutions required to deal with it in the event of a future systemic crisis. The remaining discussion will build extensively on a regulatory proposal that Enrico Perotti (from University of Amsterdam) and I launched last February.[2]

The Case for Liquidity Charges and Pre-packaged Assistance

Our proposal is to establish a liquidity and capital insurance arrangement that would compactly solve some of the problems associated with the excessive reliance of banks on short-term wholesale funding, the political resistance to assist banks during a systemic crisis, and the coordination problems associated with the rescue of international mega-banks.

Our proposal is to establish a mandatory liquidity charge that would be paid continuously during good times to a supervisor, who, in exchange, will provide emergency liquidity (and perhaps capital) during systemic crisis. This charge should work like a Pigouvian tax on pollution, discouraging bank strategies that create systemic risk for everyone (*financial pollution*). For this purpose, the charge should be proportional to banks' short-term liabilities, increasing in the maturity mismatch between assets and liabilities, and levied on all potential beneficiaries of safety net guarantees. Its aim will be to make short and long term bank debt financing more comparable in cost, inducing a lower reliance on the former. Importantly, retail deposits would be exempted from the charge (and excluded from short-term funding in the measure of mismatch) since their own (and separately priced) insurance already seems to make them sufficiently stable during crisis.

[2] *See Perotti and Suarez (2009).*

The main goal of the liquidity charges would be to realign funding incentives among the beneficiaries of the safety net. Reducing the reliance on short term market funding would reduce the spreading of panic in a confidence crisis and ultimately systemic risk. We think that the lower cost of short term funding partly reflects the fact that short term lenders bear little risk, partly because they are able to shift it away to other stakeholders (equityholders, other banks, and taxpayers) when they dismantle their positions at the first sight of trouble. Thus, the charges would make banks internalize the damage caused to others when things go awry.

Revenues accruing from these charges would go into a fund, say an Emergency Liquidity Insurance Fund (ELIF), that would have legal autonomy, pre-packaged access to central bank liquidity, and the backing of government funds, if required. The relevant macroprudential supervisor (e.g. the Financial Stability Board worldwide or the planned European Systemic Risk Council at the EU level) would trigger the extension of assistance from the ELIF as soon as systemic problems were detected. Specifically, ELIF would provide liquidity support, guarantees on uninsured wholesale funding and, perhaps, some pre-arranged capital injections. Assistance may be accompanied by specific constraints on management, such as restrictions on executive compensation, dividends or other decisions with prudential implications. Critically, no assistance would be provided to institutions that suffer problems of an idiosyncratic, isolated nature.

Given this aspect of the arrangement, the liquidity charge would work as an insurance premium: a pre-payment for the contingent support that banks and assimilated institutions eventually receive during those episodes of systemic distress. We think that the charges and the existence of an ELIF would make emergency intervention politically more acceptable, especially after the public concern raised by current rescues.[3]

Advantages Relative to Other Proposals

We think that flat liquidity requirements or higher capital requirements do not constitute the best possible solutions for the management of the systemic component of liquidity risk. A plain liquidity requirement may be a too rigid imposition for banks, impeding them to optimize on a smoother basis. Essentially, that type of requirement imposes a *price* of zero for increasing maturity mismatch if the relevant measure of liquidity remains above the required minimum and a price of infinity for increasing it if liquidity falls below that minimum. Additionally, in order to guarantee sufficient liquidity in the (hopefully) unlikely event of a crisis, the liquidity requirement will probably have to be large, forcing the financial system to hold possibly excessive liquidity in normal times.

With capital requirements the story is similar. For them to provide effective protection against liquidity problems (if at all), bank capital would need to be really large during normal times. This has obvious direct costs and several more subtle disadvantages. The latter include that shareholders tend to see bank capital as an asset to which they are fully entitled. So banks with plenty of capital on their books may be subject

[3] *Related cases for insurance arrangements have being made by Acharya et al. (2009) and Kashyap, Rajan, and Stein (2008), among others.*

to pressure from their shareholders to *lever it up*, not necessarily through leverage (which might be constrained by capital requirements) but through riskier investment strategies. Another disadvantage is that shareholders' claims on bank capital are a source of trouble in bank interventions since, at least under current bankruptcy and supervisory intervention procedures, seizing or intervening a bank ahead of formal default may be seen as a violation of private property rights.

In contrast to these alternatives, our insurance scheme arranges for the availability of sufficient liquidity (and, perhaps, capital) in systemic crises only and is intended to penalize systemic risk creation in a continuous manner, especially in normal times (using charges per unit of wholesale short-term funding that, as already mentioned, would increase with maturity mismatch).

An advantage of the proposed form of the liquidity charges is that maturity mismatch is relatively easy to compute. Systemic risk – namely the simultaneous realization of correlated tail risk – is hard to estimate, as extreme co-movements are rarely observed, and may be triggered by a different asset class each time. But liquidity runs play an important role in the escalating phase of all systemic crises and have a clearly negative amplifying effect. So liquidity mismatch can be considered a *proxy* of potential systemic risk. In this sense, liquidity charges would discourage the creation of systemic risk associated with short term funding.

To eliminate the incentives to excessively relying on short term maturity funding when the term structure of interest rates is characterized by a high positive slope (which tends to occur during good economic times), the liquidity charges might be increasing in the slope of the short end of the yield curve (say, up to one year). With this feature, the charges would be naturally countercyclical, leaning against the wind when liquidity is abundant and short term rates are very low. In addition, if necessary, an explicitly countercyclical proportionality factor might also be introduced.

The charges that we propose would probably make it more expensive for banks to rapidly expand their lending above their deposit base, but it will certainly not block it. We would expect banks to react to them by using a greater fraction of long term funding, which might advantageously imply greater monitoring from the corresponding creditors. Finally, with better incentives and counting on the contingent assistance of the ELIF in case of a systemic crisis, we think that the residual short term creditors would be less prone to panic. In each of these dimensions, our solution would imply a significant correction of problems that have contributed to the severity of the current crisis.

Implementation and Institutional Details

We coincide with most existing proposals on regulatory reform in that properly defining the perimeter of the markets and institutions subject to prudential regulation and supervision will be key to the achievement of a truly more stable financial system. Some clear lessons from the crisis are that the old distinction between commercial and investment banks was obsolete, that the existence of opportunities for regulatory arbitrage encouraged the creation of a dangerous uncontrolled shadow banking system, and that the connections between elements of that system (such as special purpose vehicles), the hedge funds, and the systemi-

cally important institutions were instrumental to the spread and amplification of the crisis.

Future regulation and supervision will hope to cover all institutions that either for their size or for their interconnectedness are systemically important (and, thus, likely receivers of assistance in a crisis), irrespectively of whether they fit into the traditional definition of a bank or not. In this sense, our arrangement should be applied to all of them.

Skeptics may fear that the liquidity charges that we propose will encourage the system to shift activities that make heavy use of short term funding into yet another shadow banking sector. This is a serious risk not only for our proposal, but for essentially all re-regulatory proposals: as soon as a shadow system is regulated, the roots of another are established. However, the shift of some short-term funded activities to the shadow banking system is not likely to be sizeable or to imply a big danger for the regulated sector if regulators and supervisors stick to the principle that the unregulated agents should enjoy very limited (or otherwise strongly penalized) recourse to the regulated ones.

Accordingly, for deals between the regulated and the unregulated sectors, our proposed scheme should assign charges increasing in the unregulated borrowers' own mismatch, if it were at all verifiable. Otherwise, any potentially mismatched asset funding should be fully charged. For instance, bank credit lines to institutions such as hedge funds might be treated as non-contingent commitments and fully charged.

The international implementation of our liquidity insurance arrangement is another complex but important challenge. Ideally, in order to properly deal with banks with significant presence in several jurisdictions, an international ELIF should be created. This ELIF might operate in coordination or under the management of the relevant international macroprudential authority defended in other proposals. Countries should choose to participate by requi-

ring either all their regulated institutions, or at least the largest ones, to join an international ELIF, pay its liquidity charges, accept its supervision, and count on its support in a systemic crisis.

The establishment of an international ELIF may sort out commitment problems. Countries that do not join should not benefit ex post. The scheme would constitute an explicit coordination device for the rescue of large international banks, preventing the issue of burden sharing to be left for difficult ex post negotiations. In this sense, the liquidity charges, accepted as insurance premia during normal times, would provide a mutually agreed metric for systemic risk and would offer an objective basis for burden sharing in crisis times. We think that it would be reasonable to accept that, in case of need, countries will contribute to funding the ELIF in proportion to the share of each national banking sector in the

liquidity charges paid during the pre-crisis period, rather than on the basis of costly and time-consuming ex post negotiations or some politically debatable country quotas.

Conclusions

This short paper describes a mechanism that Enrico Perotti and I have proposed as a response to a number of the key challenges in the process of reform of global financial architecture. In particular, our mechanism addresses (i) the regulatory treatment of liquidity risk (and its contribution to systemic risk), (ii) the establishment of some form of pre-packaged assistance to banks during systemic crises (that helps prevent or attenuate these crises in the same form as deposit insurance prevented retail panics in the old days), and (iii) the improvement of coordination in the management of crises involving internationally operating mega-banks.

As argued in previous sections, the liquidity charges imposed by our Emergency Liquidity Insurance Fund would discourage the forms of short term funding that create and amplify systemic risk. The arrangement would also provide some prepayment of intervention costs (making early intervention politically more acceptable). In its international implementation, it would constitute a starting step to ensure public assistance to international mega-banks with cost sharing based on ex ante rules rather than negotiations or politically debatable country quotas.

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Podiumsdiskussion III:
Krisenbewältigung: Die Rolle der Finanzmarktregulierung und der Geldpolitik

Panel III:
Fixing the Crisis: The Role of Regulation and Monetary Policy

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Curbing Instability: Policy and Regulation

Introduction

The present crisis has shown very clearly that the markets for a number of recently innovated financial instruments have not worked at all well. The old story of the beneficial workings of the Invisible Hand presupposes that the participants understand what they are buying and selling and this has far from always been true in the unfamiliar environments created by very rapid financial evolution. The reasons have been various: lack of transparency in the case of securitized loans, lack of legal clarity with regard to the rights of holders of different tranches of structured products, lack of an organized market for credit default swaps, etc. There is a whole host of issues of this sort.

The debate on how to prevent a recurrence of the present disaster has only just begun. Thus far it has concentrated on proposals to regulate particular instruments and the markets in which they are traded. The discussion has turned less frequently (and more delicately) to regulation of the powerful institutions that are the major actors in the financial system. Contemporary economics analyzes these problems in terms of transaction costs, informational asymmetries and moral hazard and tries to find ways to eliminate or at least ameliorate these market imperfections.

This is important work but my impression is that a macroeconomic perspective has so far been largely missing from this beginning debate. Perhaps this is because modern macroeconomics presumes that the economy behaves like a *stable* general equilibrium system. If problems arise in such a system it can only be due to *frictions* or *imperfections* of the sort just mentioned. Once these issues are analyzed, therefore, the macroeconomist would have nothing to add.

This modern macroeconomics is wrong. If it were even roughly right, none of the desperate, improvised *non-standard measures* by treasuries and central banks aimed at preventing *unstable* processes from overwhelming the markets would have been needed. All traditions of central banking have been abandoned and every line of demarcation between central banks and treasuries transgressed in the last 20 months. It is not to overcome *frictions* that the authorities have been pouring trillions of dollars, pounds and euros into the world economy.

This paper will take a different macroeconomic perspective and focus on the *instabilities* of the system that the crisis has revealed.

Three Systemic Problems

Everyone is familiar with the story of how free competitive markets are supposed to work. If demand exceeds supply, the suppliers will raise their price until the discrepancy is eliminated. If price exceeds a producer's marginal cost he will increase output until that discrepancy disappears. Both these *mechanisms* are examples of what is called negative feedback loops in control theory. No centralized decision or supervision is required for the market to equilibrate.

There are three major variables that are crucial to the economy as a whole but which are not subject to the negative feedback control we associate with the Invisible Hand, namely, the price level, the overall leverage in the financial system, and the connectivity of the network of financial institutions. Under our present arrangements, the first two[1] will be governed by *positive* feed-

[1] *For a fuller discussion, see Leijonhufvud (2009).*

back, which is to say, they are unstable. The evolution of the third over the last ten or twenty years has changed the propagation of destabilizing impulses through the system for the worse.

"The Good Old Days"

Not very long ago – or within the memory of old economists in any case – monetary stability was based on controlling the quantity of money. Financial stability was to be ensured by regulation. In the United States, this meant the comprehensive regulations of the Glass-Steagall act which embodied the lessons learned from the Great Depression.

Those good old days are long gone. In recent years, we have depended on inflation targeting by the central bank to provide price level stability. At the same time, largely unregulated markets were supposed to take care of financial stability.

It did not work.

Price Level Stability Today

Generations of students were taught that the money price level was determined by the supply and demand of money. The supply was determined by a well-known formula involving the public's preferences for using paper currency, the reserve requirements imposed on banks and the exogenously determined volume of base money. Today, substitutes for paper currency are constantly proliferating, reserve requirements do not apply to the non-deposit liabilities of banks and are often not effectively enforced against their deposits either, and – most importantly – the monetary base is endogenously determined.

This means that the system lacks a *nominal anchor*. The price level does not have a market determined equilibrium. In principle, the *sign* of its first derivative can be determined by the central bank controlling that rate of interest which is the private sector's opportunity cost of holding money. There will exist one value for this rate, called the *natural* rate, such that if the central bank sets its rate at that value, the price level would not move. This mode of control is less easy than it sounds, however, because the natural rate is unobservable. Set the rate lower than this unknown value and the result is inflation. Set it higher, deflation.

Inflation targeting, therefore, is necessarily an *adaptive* policy strategy. The central bank sets bank rate at its best guess at what the natural rate might be. It then watches the price level and if it starts to move above target, the bank raises the interest rate. Or, if deflationary pressure becomes evident, it lowers the rate. It depends in this way on *feedback* from movements in the price level to find the rate that will keep the change of the price level on target.

Until two years ago, it was widely believed that inflation targeting worked exceedingly well in practice. In theory, however, it is not at all clear that it will always be possible to make it work. There are two related difficulties. One is that while theory tells us that the price level will rise if the interest rate is set too low, it does *not* tell us *how fast*. A small error in the rate might possibly cause a large jump in prices. Moreover, if the public's inflation expectations were to be volatile, the unobservable natural rate might dodge about too fast for the central bank to keep track. In the countries practicing inflation targeting neither of these problems actually materialized as long as the late lamented *Great Moderation* lasted. Inflation expectations were not at all volatile and the elasticity of the inflation rate with respect to the interest rate was of modest magnitude. But we would be

wise to remember that these are contingent rather than permanent properties of the economy. They would not have held, for instance, in the context of one of the Latin American inflations of twenty-some years ago.

However, inflation targeting failed in the United States for an entirely different reason.[2] The Federal Reserve System lowered the federal funds rate drastically in a successful effort to counter the consequences of the *dot.com crash*. It then maintained this low rate for some three years *because* the inflation rate, by whatever CPI measure, stayed low and constant. In an inflation targeting regime, this is taken as feedback confirming that the interest rate is at the *right* level. In this instance, however, the crucial feedback loop was short-circuited by the exchange rate policies of a number of countries, chief among them China, protecting their exports to the U.S.A The price elasticity of their exports kept American consumer goods prices in check. The behavior of the price level gave the Fed no clue that it was keeping the interest rate far too low for far too long.

The policy mistake was a costly one – and not only for the United States – contributing to the build-up of a massive asset-price bubble and to a serious deterioration in the quality of credit. Thus, one lesson from the crisis is that inflation targeting is riskier and more difficult to manage well than we thought two years ago.

Leverage Dynamics and the Bubble

When everyone is increasing his leverage, asset prices will be rising and everyone will also be booking profits. Debts and claims are rising in tandem all around but the asset-price inflation also raises the book value of capital. This is a positive feedback loop (Leijonhufvud, 2009). In the absence of countervailing tendencies it will make the process unstable.

Risk exposure increases with leverage. The ability of the individual bank, business or household to meet its obligations becomes steadily more dependent on the ability of others to meet theirs. For the economy as a whole, there is also the underlying, ever present maturity mismatch. The economy's durable assets are financed by shorter term debt.

The general rise in risk exposure may not be obvious to everyone. Securitization was widely seen as diversifying risk (even though the risks of the underlying loans were anything but independent) and credit default swaps as transferring risk to those best able to bear it (or, as is now often said, to those least able to understand it). Meanwhile, rising asset prices mean that there is more collateral to go around and that, in general, borrowers appear to have

[2] *See Leijonhufvud (2007).*

more capital as backing for their obligations.[3]

Juicy carrots and big sticks combine to make individual agents form a herd running in the same direction. The compensation practices of financial institutions create enthusiastic joiners. There can be little doubts that large bonuses awarded on the upswing based on short-term mark-to-market accounting profits added impetus to the underlying instability.[4] It is equally true, however, that competitive pressures made it very difficult for decision makers conscious of rising risk to opt out of the process. The loan officer who does not lend, the risk manager who does not play along. the banker whose branch is not *doing enough business* or the hedge fund which is operating with less leverage than the competition – all are unlikely to last.

Competition between institutions competing in the same asset and liabilities markets will compress profit margins. To maintain the rates of return on equity to which their investors have become accustomed, these institutions may move in three directions: (1) increase leverage further, (2) move into riskier asset classes promising higher rates, and (3) issue shorter term liabilities on which they pay lower rates. So the boom ended up with historically high leverage ratios, historically low risk premia, high volumes of assets soon to be revealed as toxic, and some billion dollar positions financed in the overnight repo market.

Deleveraging

At a leverage ratio of 30, for example, a loss of some 3% in the value of assets held is all it takes to put an institution on the brink of insolvency. As long as asset values were steadily rising, such high leverage might not have been seen as terribly risky. Once the asset price inflation comes to a halt, the threat of bankruptcy will *concentrate the mind* of bankers. Deleveraging to get back on solid ground becomes the order of the day.

Leverage, obviously, can be reduced either by attracting more capital or by paying down debt.

Raising more capital is not easy when the institution's solvency is in doubt. Some American banks succeeded in attracting substantial sums from sovereign wealth funds (and, in one instance, from Warren Buffet), but this was before the magnitude of their losses was known. Once the extent of losses did become known it also became clear that these capital injections had been no more than drops in a large bucket. This left the government as the investor of last resort.

For reasons both ideological and practical, the US government has however tried to stay as far away as possible from *nationalizing* the banks. Very large

[3] *So, at the extreme, why not extend a "ninja" loan for someone to acquire a house that is "certain" to be worth more next year?*

[4] *The compensation schemes are not working symmetrically in the downswing, however. But then MTM accounting is largely suspended as well.*

bailout sums are still involved, but the administration still hopes to attract private capital into the banks by purchasing some *toxic* bank assets and by guaranteeing others so as to leave the taxpayer as the risk-taker of first resort.

A financial institution can reduce debt either by using the proceeds of asset sales or by directing current net cash flow to that purpose. If the banks use the inflow of interest and amortization payments on past loans to reduce their own indebtedness rather than to relend, the non-bank sector is starved of credit. In the best case, this is a slow way for the banks to earn their way back into reasonable condition at the cost of a general recession.[5] But the inevitable recession will also undermine the quality of some bank assets which in turn may require further retrenchment by the banks and trigger a destabilizing positive feedback process that, as in the Japanese case, can go on for many years.

A faster and more drastic catastrophe will threaten if and when the financial system as a whole tries to reduce leverage by disposing of assets. The asset sale by one bank causes the balance sheets of all banks to deteriorate further. This tends to be another self-reinforcing positive feedback loop, further amplified by regulatory demands to strengthen capital. Meanwhile, falling asset values will spread to reproducible assets and reduce investment in the economy. In the worst case scenario – Fisherian debt deflation – the price level begins to fall so that the attempts to reduce debt leads to a rise in real debt burdens.

The social cost of wide swings in overall leverage in the economy is very high. The loss of jobs, the loss of homes, the loss of wealth following the crash are the unmistakable components of this social cost. What is less often remarked upon is the cost of the misallocation of resources in the boom years. A lot of young talent was lured into the financial sector in those years. Society could have had better use of all that talent elsewhere.

To curb economic instability we have first of all to find a way to constrain the swings in leverage.

A Look Back: The Glass-Steagall System of Regulation

The American system of regulation that came out of the Great Depression imparted a somewhat peculiar structure to the financial industry of the United States which bears little resemblance to that of individual European countries. It is nonetheless worth discussing because the fragmentation of regulatory functions that was characteristic of the American system is a problem for the European Union today and also because the stark contrasts between it and the system resulting from deregulation help define the issues that we now have to confront.

The old American system compartmentalized the financial system into a number of distinct industries: commercial banks, investment banks, savings and loan (S & Ls) institutions, credit unions, etc. Regulations specified which types of assets each category could invest in and which kind of liabilities it could issue. Firms in one category could not compete in the markets

[5] *We should note in passing that the severity of the current recession, despite the unprecedented efforts of governments and central banks, gives us a clue to the* "role of the build-up of leverage" *in the preceding years of prosperity.*

of other categories. This segmentation by markets was moreover supplemented by additional segmentation along geographical-jurisdictional lines, confining financial institutions to operate only in the state in which they had been chartered. Thus, for example, it is not very long ago that branch banking across state lines was prohibited.

Financial regulation in the United States was matched to this template of financial structure with separate federal and/or state regulators for the various segments of the financial system. These agencies survived deregulation with the result that the regulatory system no longer matched the evolving financial system in any rational manner. Instead, it was left with numerous, unclear jurisdictional overlaps as well as areas which it was nobody's assigned function to supervise.

Deregulation was in large part prompted by innovations that transformed the financial system and did so in ways highly detrimental to the core of the old system, namely, the commercial banks. The development of money market funds ate into the deposit base of the banks[6] at the same time as securitization deprived them of much of their loan business. Twenty years ago, commercial banks were widely seen as a threatened species but one that could not very well be allowed to go extinct. Deregulation revived the banks by allowing them access to every conceivable financial market.

Lobbying pressure from the financial industry was no doubt the main impetus behind deregulation. But it is also true that academic economists and finance experts had next to no arguments in favor of the old regulations but only against. Segmentation was inefficient because it reduced competition. It prevented various forms of arbitrage. Most notably from the standpoint of finance theory, it prevented financial institutions from diversifying risk across compartment boundaries.

The crisis of the S & L industry which culminated in the 1980s was widely understood as demonstrating the defects of the market segmentation that regulation had imposed. The S&L's were anything but diversified, basically holding mortgages as their only assets. The extreme maturity mismatch between mortgages and short-term deposits was predicated on an environment of stable money. The finances of the entire industry were undermined by the inflation of the seventies which raised the nominal interest rate the S&L's had to pay above the rate earned on 30-year mortgages acquired years ago.[7] The spike in interest rates that accompanied the Volcker stabilization became the *coup de grace* for the industry.

The lesson drawn at the time was that specialization on both sides of their balance sheets had doomed the S&Ls.[8] Many would have survived had they been properly diversified.

[6] *The reserve requirements to which the banks were subject, put them at a competitive disadvantage vis-à-vis the money market funds. Monetary authorities eventually had to adapt to this situation either by abolishing reserve requirements, or allowing them to be largely circumvented, or by paying interest on the banks' required reserves.*

[7] *There were actually two stages to this process. First, market interest rates rose above the regulated maximum rate that the S &Ls were allowed to pay, draining them of deposits. When this regulation was abolished, they found themselves having to pay rates above the rates earned on their assets.*

[8] *One other lesson drawn (overdrawn?) from the last stage of the S &L debacle has been the importance of guarding against moral hazard. Some S &Ls, knowing themselves to be technically insolvent, took high risk gambles – in effect with the money of their creditors – in the hope of getting back in the black if the gamble succeeded. In the long previous history of these institutions moral hazard did not play a notable role. Brink-of-bankruptcy is the situation in which it will.*

From today's perspective, there is another, different lesson to be drawn from the S & L crisis, namely, that it was *confined* to its own segment of the financial system. Twenty-five or so years later, in dramatic contrast, a mortgage crisis originating in the United States has developed into a truly global crisis, engulfing all types of financial institutions and affecting the markets for all types of financial instruments.

Diversification versus Connectivity

Not for the first time, economists have fallen into a fallacy of composition, that is, the fallacy of believing that what is true for the individual agent will be true as well for the entire system of many agents. For the individual bank, of course, the maxim holds true that it is best *not to put all your eggs into one basket*. It turns out, however, that when you allow financial institutions to diversify in every direction they see fit, you change the nature of risks that the entire system is subject to. The *connectivity* of the *network* of financial agents is increased. This means that a disturbance arising somewhere in the system is unlikely to be confined to some small part of it but will percolate through the entirety of it. Whether in so doing it will also dissipate will depend on several further properties of the network. It will depend on whether agents in general carry high or low leverage. It will depend on the volume and distribution of *toxic* assets in the economy. It will depend whether the network has critical nodes that must not be allowed to fail.

What has become abundantly clear is that by allowing financial institutions to diversify and to multiply the markets and instruments that connect them we have let a situation develop where, from a macroprudential[9] standpoint, *all the*

eggs have ended up in the same basket. At the present time, a lot of them are broken and more are cracked. We have on our hands one giant omelet that is not easily to be unscrambled.

The Responsibilities of Central Banks

Only two years ago it was a widely accepted doctrine that central banks should be independent, that they should use their independence to constrain the fiscal policies of elected governments,[10] that their main instrument was the interest rate and that its use should be reserved for inflation targeting. As a matter of routine, it was mentioned that the central bank would also serve as lender of last resort to sound commercial banks experiencing temporary liquidity problems but it is probably fair to say that it was not thought likely that this function would actually have to be

[9] *The term "macroprudential" has been introduced by the Bank of International Settlements and most of the work so far on macroprudential risk assessment and monitoring seems to have been done at the BIS. Cf., for example, Borio (2009), and the references that he provides.*

[10] *This all was predicated on the belief that macroeconomic troubles all originated from the follies of governments and never from the rational private sector (Leijonhufvud, 2004).*

exercised on any substantial scale in any of the major industrial countries.

Today, in the United States, this nice and tidy picture of the responsibilities of a central bank and its relationship to the fiscal authorities has entirely dissolved. The line between fiscal and monetary policy has all but disappeared in the welter of financial rescue measures. The lender of last resort function has come to dominate Federal Reserve policy. Not only have the once well-defined boundaries of this function completely dissolved but it has had added to it a *guarantor of next to last resort function*[11], shared with the Federal Deposit Insurance Corporation. The Fed is not just acting, in the traditional manner,

as lender of last resort to sound but illiquid commercial banks but seems ready to come to the rescue of unsound financial institutions of every description.[12] Seeing the Federal Reserve System, in concert with the Treasury, coming to the rescue of an insurance company one of whose offshore[13] branches has brought it to ruin, one realizes that central banking has changed beyond recognition.

Central bankers are of course intensely aware of this and the Federal Reserve, the European Central Bank, and the Bank of England are all planning *exit strategies* (Papademos, 2009) that would erase the present *non-standard measures* from their balance sheets and return the banks to a semblance of normality. Even if this were to be achieved in good order (which will not necessarily be easy), it would not by itself change the fact that a future crisis would again drive the central banks back into non-standard measures. What those non-standard measures will be and who they will benefit at whose expense are matters no more foreseeable today than the non-standard measures now in effect were foreseen yesteryear. Moreover, all these non-standard measures, as we are now very aware, are inherently political[14] in nature so that the mere potentiality of their use inevitably compromises central bank independence.

One important objective of reform should be to regain a system wherein the powers and responsibilities of central banks are clearly defined and carefully circumscribed. What has put the major central banks in their present uncomfortable position is the combination of two developments, namely, the

[11] *Next to last because one assumes that the Treasury has to be the ultimate guarantor. Note that this is a new role for the FDIC presumably not anticipated in its charter.*

[12] *Traditionally, the central bank would do its last resort lending at a "*penalty rate*". That is not the current practice either.*

[13] *... if one is allowed to refer to the City of London in such manner.*

[14] *For colorful illustrations of this point, see International Herald Tribune, June 13 and 14, 2009, "Suddenly, the Fed is involved with the snowmobile business."; The Term Asset-backed Securities Loan Facility (TALF) requires central bankers to make numerous decisions on what kind of assets to accept as collateral and on what terms.*

financial crash and the fact that it occurred within a financial network the connectivity of which had been greatly increased. If we could eliminate the possibility of future crashes, we might not have to worry about the connectivity problem. Conversely, if we could move back to the many watertight compartments structure, we could be fairly assured that future financial crises would at least be confined and not global. But we cannot do either of those two things. So, reform has to work on both fronts.

The Three Problems

The discussion to this point has left us with three main problems that any program for reform of the monetary and financial system should address. First, the potential instability of the price level and the unreliability of inflation targeting as the sole instrument of monetary policy to deal with it. Second, the instability of system-wide leverage. Third, the lack of defined boundaries for the responsibilities of central banks.

There are no obvious, easy or uncontroversial solutions to these problems. Any and all proposals will produce opposition and debate. The measures proposed here are that the first problem can be dealt with through the (re-)introduction of effective reserve requirements, and the second by making capital requirements countercyclical rather than procyclical. The third, it should be confessed, raises more difficult questions than can be answered.

The Price Level

Another look back is helpful at this point. The theory underlying inflation targeting goes back more than a hundred years to Wicksell (1898), who dealt with a gold standard world with private note-issuing banks. In the course of the 19th century, the use of gold coin in transactions had largely vanished and banking systems had evolved to economize more and more on gold reserves. Wicksell asked how the price level might be controlled in a world where both these processes had reached the limit of zero demand for gold. The system would then have slipped its metallic anchor. But Wicksell showed how the price level might in principle still be stabilized by central bank interest policy.

The interesting point in the present context is why Wicksell's analysis, although it gave great stimulus to economic theorists, remained largely irrelevant to central bank practice for 100 years, only to come into high fashion in very recent years (Woodford, 2004). The reason is that, in the years following the appearance of Wicksell's work, governments more or less everywhere made paper currency issue a government monopoly and in many cases also imposed reserve requirements on banks. These institutional changes served to secure the system's nominal anchor and give the Quantity Theory another 70 or 80 years lease of life.

This should work again albeit not quite as effectively perhaps. Advocating a state monopoly of checking deposits might be going a bit far, but reimposing effective reserve requirements would reinvigorate open market operations as a tool of monetary policy. If in a few years time central banks have to face serious inflationary pressures, the bank rate alone might prove too weak an instrument. Open market operations, amplified in their quantitative effects by reserve requirements, would then prove a welcome addition to their arsenal.

Reserve requirements would have to be extended in two directions, however. First, they should apply also to

non-bank institutions that issue demand liabilities. This has to be done to level the playing field and keep funding costs the same between banks and money market funds, for example. Second, they should extend also to the non-deposit short-term liabilities, such as repurchasing agreements and notes.[15] (The *bank runs* experienced in the present crisis have not been against insured deposits but against these instruments of wholesale funding).[16] The reserve requirement ratios may of course be set at different levels for different kinds of liabilities but should apply to all financial institutions issuing a particular kind.

Leverage

The instability of system-wide leverage has been the pivotal feature of the recent boom-bust cycle. Leverage has not been contained by regulation. Existing capital requirements have acted as macroeconomic amplifiers.[17] When asset prices are rising, capital gains will swell bank capital and open up room for further expansion of the balance sheet. When asset prices fall or when the banks experience default by borrowers, capital requirements make deleveraging even more imperative.

To correct this problem, the monetary authorities should raise capital requirements above *normal* in periods when asset prices rise above the trend of consumer goods prices and reduce them, perhaps drastically, in episodes when deleveraging is the order of the day among financial institutions in general. The cyclical average should be set at probably no more than half of the leverage levels that the big investment banks reached in the recent boom.

That the financial industry would welcome such a development is not to be expected. A lid on leverage is a lid on the rate of return that the banks can aspire to realize. Moreover, this proposal would make capital requirements into another tool of monetary policy and giving the authorities the discretion to raise them in a boom would add a new type of risk for the banks. However, if using capital requirements as a counter-cyclical instrument were to reduce the likelihood of needing future Toxic Asset Relief Programs *et hoc genus omne,* governments might still find it desirable.

The Financial System Architecture of the Future

The third issue is by far the most difficult one. But although no simple, clear-cut solution suggests itself, the question of how to circumscribe the functions that we expect central banks to perform in the future seems a useful way to approach the problem of how to structure a *governable* financial system for the future.

It is almost certainly not feasible to go very far back towards the extensive compartmentalization of Glass-Stegall days. Probably, it is not even desirable to try. We might ask however whether it might be feasible to structure the financial system into a central *core* and a *periphery*, such that the core is regulated, subject to reserve and capital requirements, and strictly supervised

[15] *Apparently, Lehman Brothers had close to a quarter of its assets financed by overnight repos in the period immediately preceding its failure.*

[16] *See Shin (2009).*

[17] *This is recognized in the recent report by the Financial Stability Forum (2009a).*

with the *periphery* less regulated and supervised.[18] The core would be eligible for lender-of-last-resort assistance from the central bank while the periphery would not be so entitled. This would serve to delimit the responsibilities of central banks. To that end, however, the core institutions would have to be to some degree insulated from the possibly highly risky activities permitted in the periphery.

The obvious problem with the core-periphery idea is that the big international conglomerate banks cut across any such dividing line, wherever it might be drawn, and do so in a myriad ways. They are commercial banks, investment banks, prime brokerages and hedge funds, etc., all in one firm. They are also *too-big-to-fail* – a distinction that in some other industry would make them *public utilities* and subject to regulated pricing, etc. In the United States, crisis management by the authorities has made the too-big-to-fail problem worse than ever.

A firm enjoying the privilege that the government cannot let it fail should expect the public interest to circumscribe, if not actually meddle in, the way it manages its business. Jamie Dimon, the head of JP Morgan-Chase, knowing that more regulation is surely coming, has argued for regulation of *functions*, not of firms (Dimon, 2009). One reads this as an implicit plea to politicians and regulators not to approach the *too-big-to fail* problem by forcing the big banks to divest themselves of significant parts of their current business. The recommendations contained in the recent reports by the Financial Stability Forum are all along the lines of Dimon's plea. There is not even a discrete mention of the *too-big-to-fail* problem.

Is it feasible to achieve a *core-periphery* structure without infringing greatly on the present structure of the very big

banks? It should be possible at least to move in the direction of protecting the core from the periphery – and from itself. Lessons of recent history suggest some of the measures to be considered:

1. (Citigroup lesson): Force the banks to either bring off-balance sheet vehicles onto the balance sheet or divest themselves of them. Capital requirements might be used to give the banks incentives to rid themselves of these vehicles.
2. (Long-term capital management lesson): Weight capital requirements on lending to hedge funds relatively heavily so as to raise the implicit cost to core banks of such lending. Hedge fund operations by the banks themselves should then be subject to the same capital requirements.
3. (American International Group lesson): Forbid *naked* default swaps i.e., pure bets on default by parties who

[18] *Paul Volcker, who has repeatedly and in strong language made known his utter dismay over the proliferation of non-traditional, "non-standard" policies by the central banks, has also expressed a desire to see the banks go back to traditional commercial banking. It is difficult to see how this might be brought about without breaking up the big banks.*

do not hold the bonds that are being insured by the contract.

Conclusion

From the standpoint of risks to macroeconomic stability, our present financial system poses three major problems. One is the potential instability of the price level under present arrangements. The second is the instability of system-wide leverage. The third is the increased global connectivity of the system and the lack of any clear boundary for the responsibilities of central banks.

The first two problems may be ameliorated by giving the central banks additional policy instruments. Reinstituting reserve requirements and extending them to cover all liquid liabilities of deposit-taking institutions would make them once again an effective lever for open market operations. Giving the central banks the option of changing capital requirements in a countercyclical manner would give them a handle on the instability of leverage.

The third problem has as its center the problem of the very big financial institutions which are active in almost every market across the globe. If they are not to be broken up into smaller units that would not individually pose serious systemic risk, they must be closely regulated. In either case, their prospective profits are bound to be adversely effected. They will certainly resist any measures that would have that effect – and they have the resources to make their resistance politically effective.

There are, however, compelling reasons why the big financial institutoions must be regulated so as to truly minimize the risk of another boom-bust cycle. The *bail-outs* and *stimulus* packages instituted to ward of depression have put extreme strains on governmental finances, in particular the finances of the United States and the United Kingdom. One must hope that the fiscal situation of the major industrialized countries will prove sustainable. It is clear, however, that the public finances of these countries could not cope with another financial collapse such as the one we are living through. The institutions that were *too-big-to-fail* this time would prove *too-big-to-save* next time.

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Inflation Targeting after the Bubble[1]

The bottom-line for monetary policy coming out of the crisis is, if you have a financial problem, use financial policy tools to fix it. That applies to bubbles, which means monetary policy should not be targeting asset prices as well as inflation. This is now an embattled position to take – the need to do something to pre-empt boom-bust credit cycles seems to be self-evident on its merits. Yet, just because a situation is bad does not mean there has to be a way to fix it, at least not easily. Wishing does not make it so.

Admittedly, there has been a tendency during the past 15 years of the Great Moderation to oversell inflation targeting as perhaps the panacea for most macroeconomic problems. And this went along with an explosion of discussion in academic conferences and central bank sponsored research about transparency and central bank communication. Those of us in the little piece of the profession who do applied monetary economics have spent far too much effort on that topic. But what we were really trying to do with inflation targeting in design and what I think the actual regimes that were in place were achieving, was getting monetary policy to be very clear about what it could do and what it could not do. And monetary policy really cannot do anything about bubbles or about financial problems. Financial problems come from something else.

Trying to use monetary policy to do things for which it is not suited is a mistake. The issue is not inability to judge what is a bubble, or denial that such bubbles can do harm to the economy. The issue instead is that attempting to deal pre-emptively with bubbles using monetary instruments will almost certainly fail. The connection between monetary conditions and asset markets is far less tight than most commentators assert, if not nearly non-existent. Bubbles arise out of financial system failures, not out of loose money.

This ineffectualness of money is relevant both on the way up and the way down with credit markets. Anything short of monetary tightening that turns the financial system into a wreck is unlikely to make any difference to the development of a bubble. And as we have seen, wrecking the financial system has high costs, making pre-emption probably a bad idea on net, given that is what it takes. Easing after a bubble crash is the right move because it is only effective at reflating the economy when the financial system is functioning – as our recent experience with quantitative easing demonstrates. Reflation will not create new bubbles unless the financial system has not been fixed and had its incentives changed. What appears to be asymmetric policymaking by central banks, sometimes characterized as "the Greenspan put" attempting to protect stock market investors, is actually a reasonable response to the limitations of monetary policy.

Inflation Targeting's Supposedly Too Limited Focus

The primary thrust of criticism after the bubble of inflation targeting (IT) as a monetary regime has been of its supposed too narrow focus. By supposedly requiring policymakers to only care about inflation, IT induced policymakers to ignore the bubbles arising. Oth-

[1] *This paper is a revised and extended version of remarks presented at the Austrian central bank's 37th Economics Conference 2009. I am grateful to Neil Meads for research assistance and to Spencer Dale, Joe Gagnon, Stefan Gerlach, Ken Kuttner, Benn Steil, and Angel Ubide for discussion of these issues. The views expressed are solely my own, and not those of the Bank of England, the MPC, or any of its staff.*

erwise, it is asserted, policymakers would have looked at a broader set of indicators (including monetary aggregate growth) or reacted to potentially harmful developments that did not show up in inflation forecasts. The more sophisticated versions of this view claim that asset price movements give information that is independent of inflation indicators or usual Taylor rule concerns, and that the information should be acted upon by central banks, despite the short-term output costs. All of these criticisms essentially come down to saying that monetary policy should have been tightened more than IT alone would have (and central banks did) in the run-up to the bubble, and monetary policy should have eased less than IT would indicate (and central banks did) in the aftermath.

What is ironic if not misguided about this line of attack is that, right up until the global financial crisis, the criticism of IT was that it paid too little attention to output fluctuations. The criticism essentially was that IT was too tight a policy versus what was desirable. This, for example, is one of the key reasons why IT was never formally proposed let alone adopted by the Federal Reserve in the USA – IT was seen by some, including in Congress, as contradicting the Fed's dual mandate to worry about both output volatility and price stability. I do not believe that criticism was valid, but it points out how much of a shift has taken place for IT to be criticised now on the other side as too concerned with short-term output fluctuations.

Just because a policy is attacked from both sides does not mean it is the right one. One side could be correct, and moderation is not always a sign of optimality. Still, if one thinks about this situation empirically, it is difficult to see how IT's focus on medium-term (two- to three-years out) inflation is the source of the problem. The central bank that did not have formal IT and was mandated to care about output as well as inflation (the Fed) had a bubble. The central bank that had a monetary pillar to go with IT and was mandated to care about that as well rather than just inflation (the ECB) had bubbles in a number of its currency zone Member States. The central bank that had purest IT (the Bank of England) had a bubble, too.

Somewhat more rigorously, if one plots real interest rates versus either housing price growth or equity market appreciation for a wide variety of countries, there is no relationship. Chart 1 presents annual housing price inflation and real policy interest rates for most of the major economies (subject to data availability) from 2004 to 2007, and one finds a cloud, meaning no correlation between the two.[2] To drive the point home, the UK observations are

[2] *Switching to multi-year averages or including 2003 or 2008 observations make no difference to this picture. The countries included are Australia, Canada, Denmark, France, Finland, Germany, Greece, Iceland, Italy, Japan, the Netherlands, Norway, Spain, Sweden, the UK, the USA, South Korea (equities only), and China (house prices only).*

designated by a lighter colour, and, despite having among the highest policy interest rates over the period in real-terms, had a housing price bubble. The same lack of pattern applies if one considers equity price appreciation, as done in chart 2. Differing monetary policy goals were presumably proxied by the differences in the instrument interest rates, given how little difference there was in inflation forecasts over this period for the countries considered. In short, appreciably different monetary goals during the pre-crisis period made no difference to the emergence of bubbles (or at least to asset price appreciation).

What this really comes down to, however, is a misunderstanding of the purpose of inflation targeting. IT was a form of disciplined discretion, meaning a policy regime to limit some of the flexibility of central banks over the medium-term through law and transparency. The intent was to anchor inflation expectations with the hoped for additional benefit that short-run stabilisation policy could be more activist without harming price stability. And IT has delivered that result both in the years leading up to the financial crisis and in the crisis itself.

We should not be afraid to recognise what is real, even though current times are tough. And the fact is the great moderation for 15 years was real, and inflation targeting's contribution to that was real. Inflation expectations became much less volatile. Even today, if you look at the data on the OECD economies at the moment, it is shocking how anchored the inflation expectations remain. In a couple of countries, looking beyond the immediate recessionary period, they have popped up slightly, but that is it.

This stability of expectations remains despite the most aggressive policy easing in decades, if ever. Consider that in light of the massive issuance of public debt we've seen, all the incentives for inflation according to our models of political economy, and the sharp declines in many currencies excepting the euro, as well as the steep cuts in interest rates and the quantitative measures undertaken. Absent an effective policy anchor, you would think that inflation expectations would be shooting up, and we are not seeing evidence of that. Now, this may not be an entirely good thing, in that it may reflect the severity of the downturn, though thankfully that seems to have abated. But the basic logic that inflation targeting actually serves a useful purpose by allowing you to anchor inflation expectations for the long run, and thereby allows you as a central banker to be more flexible in responding to shocks in the short run, seems to be unchallenged by an extreme stress test.

IT delivered what it was supposed to deliver, and continues to do so. IT did not prevent there being a wide range of policy responses to the asset price run-up in this decade, reflecting a wide range of policy preferences. IT central banks were not the only ones whose economies saw asset price bubbles emerge. IT simply was not an answer to all our macroeconomic problems, and it was a mistake to think that it ever was. IT, however, was not the source of the bubble or even of policy non-response to it.

Monetary Policy and Asset Prices: Wishing Does Not Make It So

Still, given the cost of a bubble bursting, when it takes out the financial system, it is more than justified to think about trying to prevent or pre-empt such crashes in future. In fact, it is critical for central banks to do what they can in this regard. Yet, just because we

want there to be a policy response to a problem does not mean that the problem can be solved with the tools at hand. If I have a hammer, it can be useful for all sorts of household tasks, but useless for repairing a leaky shower head – in fact, if I take the hammer to the shower head, I will probably make matters worse. I need a wrench to fix a pipe leak, and no amount of wishing will make a hammer a wrench. This is the essential reason why central bankers are now looking around for what has been called a *macroprudential instrument* – that is a tool suited to the job – and a tool additional to the one that they now have in their toolkit.

The interest rate tool has been proven to be ill-suited at best for dealing with asset price booms. In the infamous Japanese property and equity bubble of the 1980s, the Bank of Japan actually did start raising rates faster than a Taylor rule would have indicated, albeit late in the game in 1989. Such rate increases were consistent with the stated intent of the Bank of Japan to pop the bubble, and clearly motivated in response to asset prices, not output or inflation. The interest rate increases proved ineffective – while they may have caused some brief slowdowns and temporary reversals in equities and property prices, the bubble kept on inflating overall into 1992. It was only a financial regulatory change, regarding the reserve and collateral requirements for banks lending on real estate, which led to the end of the bubble and subsequent crash. Similarly, the Reserve Bank of Australia raised interest rates in 2003-04 to pop the real estate bubbles in Melbourne and Sydney – as in Japan, deed matching word in that the policy tightening could not be justified on inflation forecasts alone. And similarly to Japan, after an initial deflating effect, the bubble just returned, with Australian property considered among the most overvalued by the IMF less than two years later.

Officials and economists based at the Bank for International Settlements have nonetheless made claims for leaning against the wind. By this they mean central banks raising interest rates or otherwise tightening policy in response to asset prices beyond what inflation forecasts call for. These calls come despite the absence of any successful modern examples of so doing, as seen when tried in Australia and Japan. These calls also duck the question of what scale of *leaning* is required. *Leaning* gives the impression of a rather subtle adjustment, just somewhat tighter policy than one would have absent evidence of asset price inflation. Yet, all indications are that it would take extremely aggressive policy action to counteract bubble dynamics, whether in terms of expectations or access to credit when leverage is available off of rising asset prices. It is quite a daunting prospect to tell a central bank to raise interest rates by 250 basis points when there are no signs of inflation, but it is doubtful that anything much less would have an effect.

These calls also run into the face of logic for all but perhaps the largest economies. Small open economies that raise interest rates to cut off booms can find the policy making matters worse because the interest rate tightening attracts greater capital inflows – as the Baltic states found out recently, and numerous Asian and Latin American economies experienced previously. Even for larger economies, like the USA, if one accepts that some variant of the carry trade or excess savings from Asia contributed to capital inflows bidding up asset prices in this decade, then it stands to reason that interest rate increases would at least be partially offset by additional capital in-

flows. Additionally, if real estate appreciation, and financial sector overvaluation more broadly, reflect an undesirable shift of resources from traded to non-traded sectors, interest rate policy that leads to currency appreciation would also seem to worsen matters rather than help. One might say this is leads to an argument against unrestricted global capital flows, though I doubt that would hold up in general equilibrium, but at least it cautions that unilateral monetary tightening is unlikely to have the effect hypothesized on asset prices.

There also is a legitimate concern about to which indicator a central bank inclined to lean against the asset price wind should respond. There is no persuasive guidance on this problem. There has been a lot of talk that concern for asset prices finally justifies the ECB's monetary pillar. But the ECB's leadership has made it clear, honestly and correctly in my view, that there is no simple rule that could take a central banker from money growth to asset prices or to financial instability. Let us consider that for a moment. Despite a few hundred person-years of BIS, ECB, Deutsche Bundesbank, Swiss National Bank, Federal Reserve Bank of St. Louis, and similarly inclined institutions' staff time devoted to this topic, with every possible glitzy econometric time series technique you could find, no one has been able to find a dependable relationship between any measure of money supply and asset price movements, except over longer than policy relevant spans of time.

If you do the empirical work, there is one exception to this dismissal. One can show something of a relationship between the broadest measures of money growth over multi-year periods and house price inflation. The utility of even this relationship for monetary policymaking, however, should not be exaggerated. First, there is a reverse causality here, with rising housing prices causing the creation of additional credit through increasing collateral values. Of course, that is part of the problem with

bubbles, such feedback loops arise, but for the policymaker this means that trying to stop credit growth with available means does not necessarily deal with the housing asset price growth or even credit expansion.

Second, central banks do not control broad money growth – they control short-term interest rates and narrow money growth. Obviously, one can and should have intermediate targets that are not necessarily under complete control – what else is IT if not that? – But it matters how much partial control one has. Third, as has been seen with the rather spotty history of monetary targeting in the 1970s and 1980s, it is a real risk that efforts to target such an indicator would only lead to financial innovations that would remove that indicator's relationship with real economic outcomes, such as housing price increases.

Still, this does give a suggestion for some reconsideration of how central bankers take into account housing prices. Given the cost to society of asset price busts in general, but given that

real estate boom/busts do have greater economic costs on average than equity price bubbles, it is reasonable to focus on the former (especially if we have some indication that real estate bubbles can be more reliably linked to credit booms). Given that pre-empting some equity price bubbles can interfere with uptake and development of new technologies, and it is difficult to discern when new technologies or industries are overpriced, but real estate has no new technologies and can more reasonably be benchmarked for prices, there seems to be less cost to trying to pre-empt real estate bubbles than equity bubbles. And given that our standard inflation measures do a relatively poor job of taking into account housing costs, there is certainly room for improvement. But while central banks should invest resources in trying to analyze these issues and make the insights

operational, we should not kid ourselves that a new target for policy will readily emerge. Wish may be father to the research thought, but not to the reality.

Blaming Central Banks in Part, Not Inflation Targeting

Central banks should be held accountable for their roles in the global financial crisis of 2007-09, and even more so for their contributions to the emergence of the situation which led to the crisis. Nothing I say here is an attempt to shift blame or responsibility away from central banks – it is, however, an argument that the monetary policy regime of the period, inflation targeting and its close cousins, had little to do with the bad outcomes. We can place primary blame on central banks' failures, along with those of other parts of government, with regards to financial regulation and banking supervision.

We had a failure of governance. And it was particularly a failure of governance of the financial system, both in terms of legal oversight and corporate governance over banks' decision making. We do not have to get too complicated about this. There was an ideological and intellectual mistake made. A bunch of us in the economics profession got on board with the idea that we could very narrowly define when there were market failures and when there were not, and leave the market free where there were not. The financial system was deemed to be a place where everything looked close to transaction-cost-free, with transactions occurring between consenting rational adults with relatively full information. Add in corporate and individual reputations at stake, and it seemed that self-regulation was enough. And this was consistent with a broader trend of conservatism and anti-regulatory thought that affected policymaking in the USA, the UK, and, only to a slightly lesser degree, in Western Europe and Japan, over the period. It was an intellectual and ideological mistake. But the mistake was not about monetary policy.

The mistake was about the financial sector.

In fact, I would argue that financial regulation and supervision can learn from the real point of inflation targeting – disciplined discretion and accountability through transparency. Financial supervision should be more rule-based. If you move to a much more rule-based system, with very blunt and automatic rules, a lot of the moral-hazard problems and regulatory forebearance will go away. There is a reason why bankers, not just in the USA, spent billions of dollars lobbying politicians and officials to change regulations, getting accounting rules interpreted to their advantage, engaging in mergers solely to broaden activities and get around limitations. By revealed preference, regulations do constrain financial firms' behaviour. Otherwise, they would not have spent the money to change it.

There are always people who say: "Well, self-interested actors eventually get around regulation." Yet, the entire world economy, financial system, cannot be run out of the Cayman Islands and the Isle of Man without the major economies doing something about it (as they have done recently on bank secrecy and tax avoidance). You will never have a hundred percent regulation, but it is like me cleaning my apartment. If I do not clean my apartment, there is a lot more dust and bugs. If I clean my apartment, and do a poor job, there will be 10% of the original bugs and dust, but it is a lot better. And yes, just as I have to clean every week, regulations have to be continually updated to take into account the new efforts to get around them. But one can still make things 90% clean.

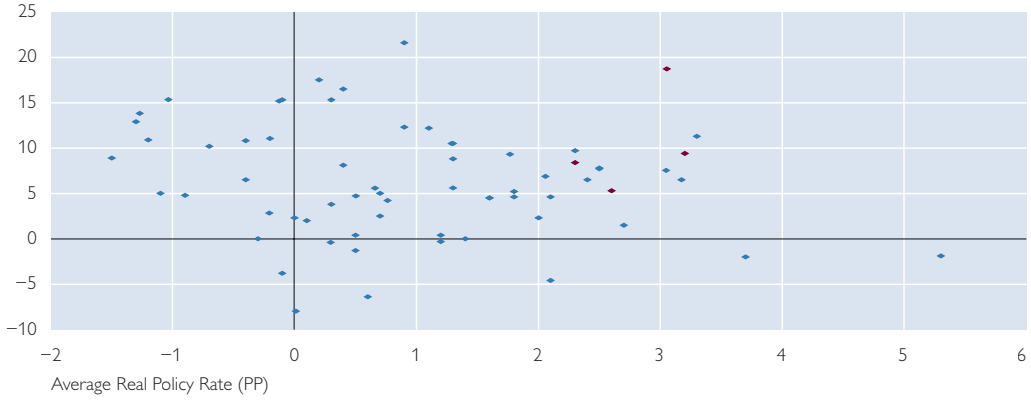
Central banks do have to be more accountable on the financial side, as we have become on the inflation side. The public really needs to watch the watchmen. This is why we talk about governance. If you look as the history of this period is written, it is already becoming clear that there were many decisions made – not just by the Federal Reserve, but by the ECB, the Bank of England, the Bank of Japan, but especially by the Fed – where there were discretionary interpretations and exceptions were granted to give financial firms more room for play with less need to provision or report. This was part of a broader unwillingness to enforce regulations that were on the books, an unwillingness to keep supervisory conduct up-to-date with what was going on. The point is not that we can do a technical fix and tweak all this into place. The point is there should be less discretion about enforcement, and clear benchmarks to hold central banks accountable.

Appendix

Chart 1

Annual (2004 to 2007) Real Policy Rates and House Price Inflation

Annual house price inflation in %

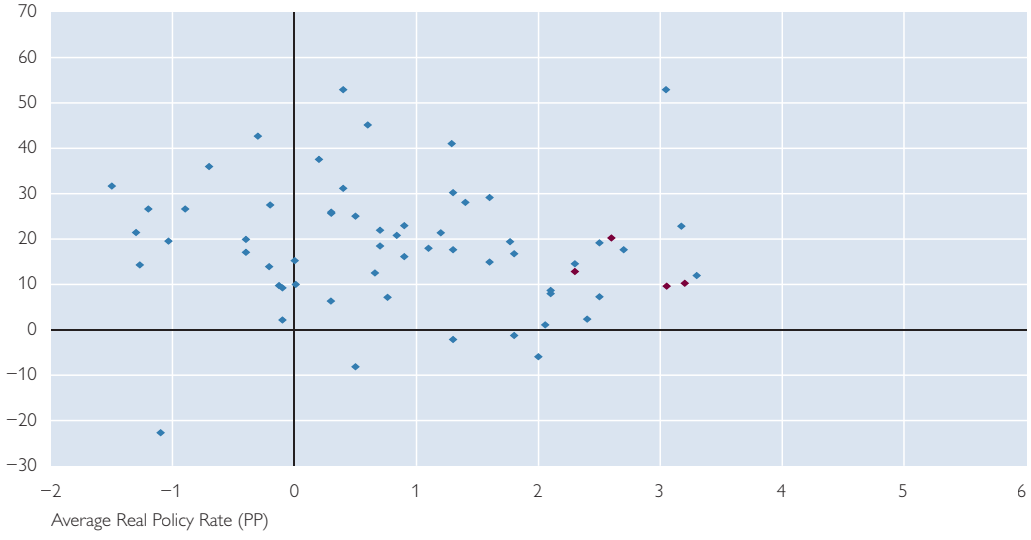


Source: Author's calculations.
Note: UK in red.

Chart 2

Annual (2004 to 2007) Real Policy Rates and Equity Price Inflation

Equity price inflation in %



Source: Author's calculations.
Note: UK in red.

37. VOLKSWIRTSCHAFTLICHE TAGUNG 2009











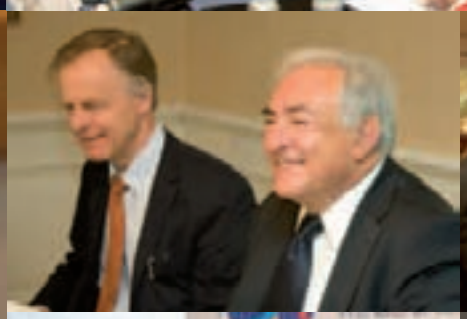
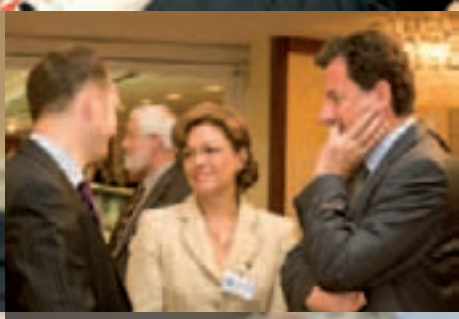


37th ECONOMICS CONFERENCE 2009













Tagungsblock 3:
Was kann und sollte auf nationaler Ebene getan werden? Lehren für Österreich

Session 3:
What Can or Should Be Done at the National Level? Lessons for Austria

Wolfgang Duchatczek
Vize-Gouverneur
Oesterreichische Nationalbank

Einführungsstatement

Sehr geehrte Damen und Herren,
der heutige Vormittag widmet sich der Frage, was die nationale Wirtschaftspolitik in der Krise tun kann und soll und welche – vorläufigen – Lehren sich insbesondere auch spezifisch für Österreich bereits jetzt ziehen lassen. In Österreich kann man den bisherigen Krisenverlauf ungefähr in vier Phasen einteilen:

– **Phase 1:** Zwischen Mitte 2007 und der ersten Jahreshälfte 2008 waren zunächst nur vergleichsweise geringe Auswirkungen auf Österreich zu beobachten. Österreichische Banken hatten sehr geringe US-Subprime-Exposures. Die realwirtschaftlichen Zahlen blieben weiter – beinahe überraschend – gut.
– **Phase 2:** Ab Herbst 2008 bewirkte die internationale abrupte Verschärfung der Finanzkrise auch ein massives Übergreifen auf viele europäische Länder und auch auf Schwellenländer. Auch mehrere Länder in Zentral-, Ost- und Südostosteuropa (CESEE) gerieten zunehmend unter Druck. Das österreichische – bislang sehr erfolgreiche und ertragreiche – Bankenengagement in Osteuropa rückt zunehmend ins Interesse. Internationale Hilfe für osteuropäische Länder war noch nicht in Sicht. Die Regierung begegnete der Krise durch ein umfassendes Bankensicherungspaket kombiniert mit entschlossenen Konjunkturstützungsmaßnahmen.
– **Phase 3:** Seit etwa Jahresbeginn ist klar, dass die Krise auch in Österreich eine tiefe Rezession mit sich bringt – wir müssen heuer mit etwa –4% realem BIP-Einbruch rechnen; was allerdings eine bessere Situation als in vielen anderen europäischen Ländern ist. Der Staatshaushalt wird sowohl beim Defizit als auch bei der Schuldenquote deutlich leiden – vergleichbar wie in anderen EU-Ländern. Gleichzeitig wurden im ersten Quartal umfangreiche Unterstützungspakete des IWF und der EU für zentral- und osteuropäische Länder beschlossen, die den Ausblick für die Region deutlich verbessert haben.

– **Phase 4:** liegt vor uns – ich hoffe, sie wird von einem baldigen Aufschwung und einer Rückkehr zur *wirtschaftlichen Normalität* gekennzeichnet sein. Österreich ist gut gerüstet. Wir sind in die Krise von einer sehr guten wirtschaftlichen Ausgangslage mit ausreichend Reserven gestartet, um auch eine gewisse Durststrecke gut bewältigen zu können. Die über Jahrzehnte erprobte wirtschaftspolitische Problemlösungskapazität und die Einbettung des Landes in der EU und dem Euroraum bieten sehr gute Voraussetzungen dafür, dass Österreich aus diese Krise gut meistert und das nach wie vor bestehende enorme Potenzial des geeinten Europa optimal nutzen kann.
– Es ist gerade in der aktuellen Periode großer Unsicherheit besonders wichtig, in *Szenarien und Optionen* für wirtschaftspolitische Antworten zu denken. Finanz-

system- *Stresstests*, wie wir sie für Österreich ja in der Vergangenheit immer wieder durchgeführt haben und wie sie jetzt auch EU-übergreifend im Gange sind, sind dabei eines von mehreren nützlichen Tools. Aber auch auf makroökonomischer Ebene ist es nützlich, in Szenarien über die weitere Entwicklung der Weltkonjunktur, der Finanzmärkte, Rohstoff- und Energiepreise und Erwartungen der Wirtschaftssubjekte zu denken.

– *Angemessene wirtschaftspolitische Antworten* stehen vor der schwierigen Herausforderung, mehreren, *teilweise konfligierenden Zielen* gleichermaßen gerecht zu werden. Zum einen sollen sie *unmittelbare Linderung der Krisensymptome* bringen. Dies ist absolut legitim bzw. teilweise unabdingbar, denken wir etwa an Programme zur Abfederung sozialer Härtefälle infolge

der Krise, an Hilfspakete für in Liquiditätsnot befindliche Unternehmen, an staatliche Eigenkapital-Bankenhilfspakete oder an die jüngsten unkonventionellen Maßnahmen des Eurosystems. Die unmittelbare Krisenhilfe kann aber auch notwendig sein, um *dauerhafte schwere Schäden für das Finanz- und Wirtschaftssystem zu vermeiden* – denken wir etwa an den Verlust von Know-how und Arbeitskräften, an stillgelegte und nicht mehr aktivierbare Fabriken oder an desaströse Schäden von *Banken-Runs* oder –*Konkursen*. Gleichzeitig bedeuten die erheblichen fiskalischen Kosten der Rettungsprogramme aber eine *große Belastung für künftige Staatshaushalte,* die – etwa durch eine immer drückender werdende Steuerlast oder über künftig schlechtere staatliche Infrastrukturleistungen – Wachstum und Beschäftigung in der Zukunft nachhaltig behindern können. Es ist *wichtig, sich dieser Trade-offs bewusst zu sein,* vor ihnen nicht die Augen zu schließen, und durch *intelligente Krisenmaßnahmen* auch langfristig positive Wirkungen zu erzielen – Stichworte: Krise zur Aus- und Weiterbildung nutzen, Investition in erneuerbare Energien, Wärmedämmung, F&E sowie Infrastruktur.

Der heutige Vormittag zieht Lehren aus dem bisherigen Verlauf der Krise in Österreich und diskutiert mögliche wirtschaftspolitische Antworten.

– Wir werden uns zunächst in *Panel I* mit der Frage beschäftigen, inwieweit bzw. mit welchen Mitteln sich ein kleines, offenes Land wie Österreich gegen internationale Schocks schützen kann.
– *Panel II* wird auf die bisherigen Erfahrungen und auf Lehren der Bankenhilfspakete in Österreich eingehen.
– *Panel III* wird die in den letzten Monaten manchmal gestellte Frage behandeln, ob die österreichische Strategie in Osteuropa der letzen 10 bis15 Jahre das Land möglicherweise einem *geographischen Klumpenrisiko* ausgesetzt hat oder ob sie nicht umgekehrt eine sinnvolle und nützliche Diversifizierung der vor-

herigen Fokussierung auf Deutschland, Italien und wenige andere westeuropäische Wirtschafspartner erreicht hat.

– *Panel IV* wird die Folgen der Krise für Österreichs Unternehmen und Arbeitnehmer und die Antworten der Wirtschaftspolitik diskutieren.

Podiumsdiskussion I:
Wie gut kann sich eine kleine offene Volkswirtschaft wie Österreich gegen große internationale Schocks schützen? Strategien zur Stärkung der Krisenfestigkeit

Panel I:
To What Degree Can a Small, Open Economy Like Austria Be Shielded from Large International Shocks? Strategies for Greater "Shock Resistance"

Karl Aiginger
Director
Austrian Institute of Economic Research

Strengthening the Resilience of an Economy
Strategies to Prevent Another Crisis[1]

The financial crisis has affected the real economy in stages yet nevertheless at an unexpected rate and with all regions being affected simultaneously. It advanced almost independently of the regions' exposure to the actual initial causes, among them the subprime crisis, innovative financial products, dubious micro-economic incentives and macroeconomic imbalances. The following analysis poses the question of how the national economic structures can be made more resilient to a shock (be it a financial crisis or another turbulence) and how economic policy can act in order to stabilise the economy before and after such a shock. This analysis supplements studies on the causes of the financial crisis, on proper macroeconomic responses in the crisis and reforms of the regulation on the national and international level (Aiginger, 2009). It enlarges the menu of the traditional instruments of economic stabilisation policy by combining them with structural policies. Measures in five policy areas are discussed which could be the nucleus of a more far reaching prevention of a further crisis. However, a resilient economy is not in itself a political goal; it is only a necessary condition to a successful growth and employment policy. Furthermore, economic policy to increase resilience against shocks should not contain any protectionist elements since these lead to losses in income and employment levels.

1. Preliminary Remarks and Limitations

There is an increasing number of analyses about how the current financial crisis came about. They discuss the contribution of the financial sector, its *innovative* products and the inefficiency of existing regulation, the imbalances in the global economy and the role of globalisation. They suggest how to combat the present crisis, and also touch on how the economic system in general could react in the long term, and discuss the role of the state.[2]

In contrast the following article asks a more specific and narrowly defined question: What can or should be done to make national economic structures more resilient? The existing national structures, institutions and strategies displayed little resilience to the shocks originated in other regions and resilience seems to have decreased dramatically over the past decades. There seems to be a consensus that globalisation and internationalisation of the financial markets have increased the speed with which the crisis spread across almost all countries. The question that arises is whether one can and should create structures which are more resilient or whether such structures might in themselves have disadvantages as regards efficiency, growth, and employment.

There are few economic strategies which, isolated at a national level, can make an economy more resilient without carrying negative consequences for the efficiency or competitiveness of that economy. Most of the elements of any strategy need also to be part of an international strategy in order not to reduce the positive effects of globalisa-

[1] *This lecture was presented at the annual economics conference of the Austrian central bank 2009 under the title "How Can a Small Open Economy Like Austria Protect Itself against Large International Economic Shocks?" An extended version will be published in Intereconomics (Review of European Economic Policy) in October 2009. The author thanks Klaus Friesenbichler, Angela Köppl, Sonja Schneeweiß, Peter Szopo, Gunther Tichy, Ewald Walterskirchen, Yvonne Wolfmayr and Andreas Wörgötter for valuable comments and Dagmar Guttmann for research assistance.*

[2] *See Aiginger (2009), Hellwig (2008), Leijonhufvud (2009) and Mooslechner (2008).*

tion. However, globalisation and internationalisation can and have to be supplemented/supported by policies at the national level or firm-level strategies.

I do not wish to make economic resilience the most important political goal. Indeed it would be the sixth goal within the last four years to be of the highest level of priority. The five preceding ones were: fighting unemployment during the middle of the decade (winter 2006 had the highest levels of unemployment since the 1950s), increasing economic growth (WIFO-Weißbuch, 2006), fighting inflation (specifically in 2008), combating global warming (Stern Report, 2007) and containing the impact of the financial crisis (through monetary policy at the zero bound, state loan guarantees and fiscal stimulus measures). In previous talks I have called the quick change of policy priorities *subject hopping*.

The main goal of an economy in the longer term is to promote employment and growth under the constraints of social and ecological objectives as well as economic stability (defined as moderate inflation and cyclicality). As a result of our experience in the current crisis we would add resilience as a new important constraint. Resilience is defined as the ability of an economy to reduce the probability of further deep crises or at least to mitigate the effects of a crisis.

However, whilst resilience is a constraint only, not a final goal, it should not be ignored. Tackling a constraint in an isolated manner leads probably to some loss of employment and growth. Furthermore a national strategy which is not embedded in an international one will carry even higher costs. National solutions which contain even a hint of protectionism or which reduce the openness of the economy should be avoided since the very openness, specifically for the Austrian economy considering its balance of payments surplus, was a factor of its success. The national protectionist policies adopted during the global economic crisis in the 1930s actually contributed to a deepening and lengthening of the crisis. The correct approach in order to boost economic resilience consists of proposals for measures which in part have an international and in part have a national dimension and which support the other strategic goals of the country's economic policy. Through the synergy of these measures with growth and employment policies it is possible to cushion or even turn around negative growth effects of the crisis.

2. Defining the Question and Policy Areas

Therefore, the precise question to be posed is: How can a national economy protect itself from a future deep crisis without compromising its goals of growth and employment and without reducing its degree of economic openness?

To provide an answer to the question we screen strategies and measures in five policy areas. Insofar as the strategies are supported by policy measures – and not followed by private firms alone – the measures significantly extend the traditional instruments of economic stabilisation policy. We furthermore discuss (i) the ability of economic policy to support strategy lines, (ii) whether the strategies are feasible on the national level alone or only internationally and which side effects on growth (iii) and costs (iv) could exist (table 1).

Policy Area 1: More Resilient Economic Structures

Strategy 1: Upgrading the Industrial Structure

Sectors with reduced exposure to price and business cycle volatility, e.g. highly

processed products as opposed to raw materials and intermediate products, are less influenced by economic cycles even in the current crisis. However, this time the fluctuations in the machinery and construction sectors have been particularly high. The car sector was always strongly cyclical, this time even more so due to flawed model policies (failing to adapt to increasing fuel costs or to look for alternative drive systems). Non-durable consumer goods are less cyclical compared to durable consumer goods. A larger proportion of non durable consumer goods would reduce cyclical fluctuations but could be at the expense of growth since demand e.g. for food and clothes grows more slowly than for other products and Austria is at a competitive disadvantage in this sector. What does make an economy more resilient to a crisis is a larger service sector. Although, it must be said that fast growing business services are more prone to stronger fluctuations (as compared to personal and public services). High value industrial products with a fast growth rate but also with a service component or product differentiation by quality definitely go some way to insuring against large fluctuations. This is also true of an industry structure which continually and prospectively incorporates the European energy and climate packages into any investment plans. This would also reduce fluctuations which occur as a result of the increasing priority of environmental goals.

It is however counterproductive to reduce the share of industry in output as it is the basis of many business-related services. There is also a lack of arguments which would justify the government intervening in a market economy in this way. Furthermore Austrian industry is a model for success on both a national and international level (Aiginger and Sieber, 2009).

Strategy 2: Regional Diversification of Exports

A broad spread of exports across all regions is usually an effective insurance against a crisis. The simultaneity of the economic downturn in the current crisis

surprised everyone but even now there markets which are still growing faster than the average or which are already growing fast again after the immediate impact from the crisis. Since one can assume that the next crisis will not be as synchronised it is advantageous to diversify exports across all regions whilst paying special attention to growth markets such as the Middle East, China, the emerging EU Member States and neighbouring markets (Turkey, Ukraine and Russia; Wolfmayr, 2009).

Strategy 3: Build in Buffer and Avoid Lock-in

Building up inventories instead of just-in-time delivery could be increase resilience. However, larger stocks may have the effect of reducing efficiency and increasing costs. Diversifying suppliers (having more than one), a broader range of potential buyers (more than one dominant buyer) and diversifying the application range of products (chip pro-

duction for cars, mobile telephones and conveying machinery) can have a stabilising effect. Diversification may also reduce the amount of research provided by a supplier for a fixed buyer. Technical knowhow in the supply industry, which is valuable to multiple purchasers and for diverse purposes, generally increases flexibility in a crisis.

Public or private storage of goods which tend to be cyclical and whose supply is relatively fixed in the short term (difficult to expand) could be considered, e.g. food and energy. This would curb extreme fluctuations in price and lucrative speculation. Buffer stocks should ideally be on a supra-regional (e.g. European) level.

Strategy 4: Strengthening Automatic Stabilizers

High marginal taxation and high replacement ratios (e.g. for unemployment benefits) can slow down an economic boom or quickly smoothen a recession (without any additional discretionary economic policy intervention). However, both instruments have a downside with regards to efficiency (they may reduce workplace motivation and efforts by the unemployed to find a job). We should think about financing social security to a higher degree from tax revenues. The new budgetary framework *(Haushaltsgesetz)* sets spending limits, which, strictly applied, provide a buffer against the state spending too much money during a boom through expenditure ceilings. This prevents the dramatically increasing tax revenues, as seen in 2008, immediately being spent on additional spending programmes which were set up on short notice. Additional mechanisms would be desirable in regional administrative bodies and for the special financing (funds). Also in these institutions any excess funds will immediately be spent in boom time and if there is a deficit an additional grant will be demanded from the *higher* level.

Policy Area 2: Increasing Economic Growth

Strategy 5: Investing into the Future

Innovation and education strategies are recommended. They make sense both from a growth and employment point of view and as well as from the efficiency aspect. Research and education create positive external effects, thus economic policy should subsidise these expenditures. More innovative firms with a highly qualified workforce are better placed to produce specialised products and more bespoke solutions for customers and as a rule are less vulnerable to a crisis. Competitiveness based on higher quality instead of lower prices increases resilience as does a top 3 or top 5 position in important market niches such as environmental technologies.

Strategy 6: Directing the Public Sector Towards Growth

Economic growth can furthermore be increased by directing tax revenues and government spending towards growth

and employment. A tax system which is growth orientated reduces the tax burden on labour. An expenditure strategy which is growth enhancing fosters education and training, innovation and intangible infrastructure.

Strategy 7: Projects with a Dual Purpose and High Employment and Growth Effects

Policy interventions to stabilise the economy in a crisis are easier and even more seminal if the projects have a dual purpose. In other words in addition to supporting demand they also promote long term goals, increase production capacity and improve competitiveness. Projects in both the environmental and health sectors are an example. The social need for, and probably the actual market potential of, health and environmental solutions are gaining importance. They further contribute to the resilience of an economy because they are not cyclical.

Policy Area 3: Emphasising on Longer Term Goals

Strategy 8: Measure Performance over the Long-Term

If financial flows, management salaries and company ratings are more focused towards performance over the longer term, incomes will be stabilised and incentives to undertake pro-cyclical activities reduced. Corporate and economic development will be further stabilised and risks lowered if the importance placed on quarterly earnings, daily and weekly share prices is reduced. A more long term investment horizon reduces the importance of short term projects. Company presentations, reports and ratings should contain longer term corporate goals and longer term interests for stakeholders, as well as covering investment in human capital, and both social and environmental corporate activities. Bonuses should only be paid out in the case of sustained success, and, even then, only with a time lag between the decision to award a bonus and its actual payment.

Strategy 9: Start-ups

It is important for the dynamics and maybe also the stability of an economy to support young innovative firms, gazelles, and start-ups in general and even more so in a crisis (e.g. New Self-Employed). Therefore, start-ups should be encouraged particularly in a more difficult economic climate. Specific support for Spin-offs or for forming a company as a way out of unemployment should be considered.

Since *venture capital* (especially capital for the early high risk stage of a start-up) is somewhat tight, it is important that new framework directives are speedily implemented and that a state financed *fund of funds* can stabilise funds available to investors even in a crisis. The fund of funds would reduce the risk for private investors by virtue of the state's minimum stake in the venture capital. The Fund could also be tasked to deal with anti cyclical funding.

Strategy 10: Anti Cyclical Wage Policy

Demand can be stabilised by developing a wage policy which is limiting wage increase during a boom but stabilising or increasing the wage share during an economic downturn. Such a policy has more scope if it is also pursued at an international level (or at least EU level). However, such policies mean that the costs for firms with structural problems would become dramatically high in the trough and thus the risk of bankruptcy and job losses increases. A stabilising wage policy could be supplemented by employee profit sharing in

good times and guaranteed minimum payments in a recession

In times of economic crisis one could also strive for higher spreads in wage increases. Consumption can be stabilised through relatively high wage increases at low incomes (with a given increase in aggregate wages). Shareholders demand returns even in a recession. However, if there is high profit growth during a boom then in a recession there must be low profits or losses. In any case, if profits fall by 50% that is not actually disastrous, but simply a cyclical reality. It makes no sense, either at macroeconomic or business level, to strive for profit at all costs in a recession (thereby not investing in the future or increasing wages)

Strategy 11: Thinking More Long-term (European Model)

The Anglo-American model places more emphasis on short term incentives and market clearing, usually through the use of price mechanisms. They are further reinforced through competition policy and are deliberately not tempered using market regulation. The European model is less based on monetary incentives, knows prudence (e.g. in accounting) and regulates using a combination of targets for both price and quantity. Quota regulation and targets can be stabilising but they hide the danger of slow structural change. The trend of moving from quotas or regulatory rules to more price flexibility after decades of deregulation and liberalisation could be over in several areas. The former separation in the US financial sector between commercial and investment banks etc. – called *compartmentalisation* by Axel Leijonhufvud (2009) – was definitely not ideal. However, the crisis has shown that lifting these separations and creating new financial products in unregulated institutions, as well as forming new companies (Conduits, Special Purpose Vehicles) had its own dangers. The earlier arbitrary subdivision of the dynamic market in the USA carried the advantage that any crisis was limited to one section of the economy (e.g. the savings and loan crisis in the USA in the 1980s).

The combination of private pension provisions with minimum payments and returns guaranteed by law can stabilise consumption and be fair from a distributional point of view. The management of private pensions must also incorporate life cycle considerations which imply e.g. reducing investment in shares as retirement approaches and not only pursue the highest return. The combination of foreign currency loans with a repayment model (repayment vehicle – Tilgungsträger) which is dependent on share prices is not suitable for low wage earners.

Policy Area 4: Avoiding a Crisis

Strategy 12: Smart Regulation

Regulation should at least not contribute to any crisis (which was the case with the regulations in the Basel II agreements, compare Hahn, 2003). The goal of regulatory reform should be to introduce anticyclical equity provisions and to take due account of systemic risk in the financial sector (macro-prudential regulation), rather than assessing risk at the level of individual products. The following measures should not be disputed: international cooperation in financial regulation; all financial institutions should fall under the remit of the financial regulator, the financial regulator should make any necessary warnings, as should economic research institutions and central banks if there are extraordinary yields, substantial deviations of price earnings ratios from their historic average, or unsustainable price rallies and speculative waves.

These institutionalised warning mechanisms would counter any tendencies in the market to become over optimistic in times of boom. Regulators and analysts must build into any regulatory measures the fact that financial markets tend to have waves of optimism/pessimism. It is the task of analysts and of any monetary policy to at least keep an eye on any *economic bubbles* and not only to clean up the mess afterwards.

Part of any regulatory measures must occur at the international level (cf. Proposals concerning the European Systemic Risk Council). National regulations can and should supplement these. Regulations, which are stricter at the national than at the international level, e.g. higher equity provisions or lower leverage, could not be enforced at a national level and would negatively affect competitiveness. The monitoring and control of high risk activities or poor governance in financial institutions will increasingly involve firms which are active in more than one country. It would therefore be worthwhile involving international analysts and experts, in the work of the national financial regulatory bodies.

Strategy 13: Work against the Pro Cyclical Nature of R&D Expenditure

During a crisis firms reduce their investments in projects with long term returns, which include R&D expenditure. This is especially true in large international firms with subsidiaries in several countries. Research incentives and incentives for certain important investments could be made more anticyclical. Although constant framework conditions are naturally important for longer term activities, state research subsidies should be specifically increased during any crisis. Decreasing third party funding for e.g. university research should be compensated for.

Strategy 14: More Critical Evaluation of Mergers and Company Size

Competition policy has not been sufficiently critical of mergers, monopolies and oligopolies over the past few years. Mergers, and the size of a company, need once more to be regarded with a

more critical eye especially in the case of a take-over or merger financed by credit. The disadvantage of large companies is that if they have problems, they generally bring down whole regions, and thus tend to be bailed out with large financial packages. Therefore, companies which are essentially *too big to fail,* need to be subject to tighter competition controls and reporting obligations. Company ratings will need to become more frequent because these companies are more active in the bonds market. One possibility would be that once a company reaches a particular size, market share or is active in a particular number of countries, ratings become mandatory and thus complement the reporting obligations on long-term strategies by firms. More competition (entry of new companies, less dominant firms, competition in liberal professions *(Freie Berufe)* can make an economy more resilient.

Strategy 15: Tax Financial Transactions, Evaluate Financial Innovations, Reduce Speculation

Taxing short term financial transactions makes sense for many reasons, and has been condoned on many occasions (Schulmeister, 2008; und Schulmeister, Schratzenstaller and Picek, 2008). The size of the financial sector has grown relative to the *real* economy (if such a dichotomy can be measured empirically). The internationalisation of the financial sector has supported the growth of developing countries and the new members of the EU and allowed them both to catch up with the rest of the world/EU.[3] However, not all transactions promote growth, and many transactions do not actually serve towards determining the long term value of an asset but rather exploit chance changes in exchange rates, share prices or other financial products. We have

clearly seen the limits of financial models where the provision of funds is separated from its risk (Originate to distribute). Although it must be emphasised that securitisations have been advantageous for both loan providers and borrowers.

Strategy 16: Deleveraging and a More Stable Shareholder Structure

Companies which have a higher equity ratio are more resilient, as are companies which have a stable owner structure. This in turn means that firms able to avoid the need to maximise short term returns through taking on more debt and more risky projects and that firms are able to bear losses in a recession. All company reporting on (high) returns on equity should disclose the leverage factor (by standardised indicators). There is a loss of efficiency if shareholder structures are too stable, and if any mistakes or missed opportunities are not spotted.

A period of *deleveraging* is a period of low growth. This is why demanding a higher equity ratio affects short to medium term growth. Empirical studies have shown that before the crisis, in the industrial sector there was no general over-indebtedness relative to equity but the opposite was true in the financial sector.

Strategy 17: More Regionalization

Those firms and industries which have a higher share of exports are worse hit by any worldwide crisis. Companies with a more regional distribution and which are more regionally integrated are less exposed. Lengthy transportation of products (often merely for an intermediate stage of production) is being criticised from an environmental point of view and does not always seem to be entirely necessary. The only measure which can be used to promote a return to a more regional basis, without having to accept any loss of efficiency, would be to include all the external costs and side-effects of transportation in its actual cost. This would

[3] *It also increased the probability of financial crises, however.*

also be an environmentally desirable outcome.

More regionalisation does not automatically mean there is less risk of a crisis but would mean that it might not spread so simultaneously. However, too much regionalisation can bring with it losses in efficiency and growth since you forgo the gains from the international division of labour. This policy also works against a wider and more diverse (regional) market.

Policy Area 5: Crisis Stabilizing Institutions

Strategy 18: Budget Surplus before a Crisis

The most effective macroeconomic protection against the consequences of any crisis is a budget surplus over the whole of the economic cycle. The minimum to be expected would be a considerable cyclically adjusted *(structural)* budget surplus in each peak of the cycle. The surplus can then be used during times of crisis to stabilise demand in the entire economy without having to fear future tax rises or public expenditure cuts.

Limits to taking up new public debt need to be spotted early. If funds are put aside early the necessity to save during or after a crisis is reduced.

Strategy 19: Construction Ready Projects

During a crisis demands are often made for construction projects which can immediately be set in motion. Particularly in the current crisis it has become clear that the time lag between deciding on a stimulus package and actually setting in motion big construction projects is long. This time span – called *implementation lag* in literature – may even have risen over time. The projects need to already be planned in advance, including all necessary construction permits and with a completed tendering process. Smaller projects on a regional level can be more speedily set in motion than larger ones. They should, however, also be financed by a fund because during any crisis even the tax revenues at a regional level decline rapidly. It should also be noted that establishing a fund does carry certain costs and reduces budgeting transparency when putting together a budget.

Strategy 20: Supporting Firms with a Viable Business Model Only

Every crisis contributes to structural change. Economic intervention should reduce the negative effects on employment but without preventing this structural change. This means that any governmental support (cheap loans, purchasing incentives, guarantees) should be strictly linked to concepts and restructurings (including management and ownership structures) which are looking to the future. Otherwise a crisis actually becomes the building block of further and deeper crises (at least in a section of the economy).

Strategy 21: Innovative Solutions to Limit Unemployment

Reducing working hours in the short term and in a reversible form will reduce unemployment. Models where working hours are calculated over longer periods of time and flexible working time arrangements have such an effect. This free time should be used to get school certificates or late graduation from apprenticeship trainings. There now tends to be a shortage of qualified workers. Unemployment is known to be inversely correlated with education.

It is important not to reduce the workforce in the long term. Reduced working time should be used to catch

up on further qualifications (apprenticeship, bachelor studies, courses at politechniques etc.). Any further education should lead to some form of formal recognition as this in turn increases job mobility. Not all employees will be able to be employed in exactly the same companies after a financial crisis.

Active labour market policies foster growth. Broader qualifications and training which is forward looking reduce the effect of fluctuations in output on the labour market. If in a recession there are still sectors and companies which could actually produce more if they found the correctly qualified staff (engineers, skilled workers, carers and child carers), a more flexible workforce would actually reduce economic fluctuations (level of mismatch is reduced).

Strategy 22: Experience Rating

Companies which avoid fluctuations in employment inhibit less cost on unemployment insurance funds and should thus pay less contribution. The bonus could be calculated either in absolute or relative terms to the sector average (cf. WIFO-Weißbuch, 2006). The need to lay off staff or have seasonal contracts is reduced if fluctuations in output are reduced or if employees can be flexibly employed and carry out different tasks during the year.

Strategy 23: Broader Company Goals, Trust and Distributional Justice

The single goal of short term profit leads to more pronounced cyclical fluctuations. Those companies which pay attention to the development of human capital and capabilities, which take into account environmental and social aspects, and for whom Corporate Social Responsibility is a given, have a more lasting success and contribute to reduced economic fluctuations. They are also more easily reconcilable with the broader goals of economic policy (environment, full employment, distribution).

Broader corporate goals (Corporate Social Responsibility in a wider sense) should also have a place in company assessment by financial analysts. They form a trusted base on which flexible and sustainable strategies can be built. Performance orientation, fairness and flexibility are the important elements of success in the Scandinavian models and in a functioning social partnership. In countries with such structures people are more prepared to see openness and globalisation as advantageous. Micro economic change needs trust and macroeconomic stability and at the same time contributes to economic resilience.

3. Summary

The theory of business cycles explains how there are short term fluctuations around a medium term growth trend. The medium term trend is taken as a given. It is defined by factors which do not influence economic fluctuations and which cannot be changed by stabilisation policy (i. e. are exogenous). The instruments that can then actually be used to stabilise an economy become somewhat limited: monetary policy, budgetary policy and possibly also redistribution of income for the benefit of lower income earners. The time lag for such policies to take effect is extremely long and often even longer that the economic crisis itself. The structural effects are becoming more problematic as the budget deficit finances construction projects which are not viable in normal times. Economic stabilisation policy has a tendency towards asymmetries: deficits in recessions are not matched by surpluses in boom times. Neverthe-

less, the advantages of anticyclical as compared to procyclical or neutral budgetary policies are a central and important economic insight.

The current world wide crisis of the real economy is long enough for all monetary and fiscal strategies to be exhausted. The long time lags before policies have had an effect became clearly visible this time. Programmes for additional state spending, which were decided upon in Austria in October 2008, will only have an effect in the second half of 2009. Financial aid for banks and guarantees for industry loans only come into effect in early summer 2009. Policies which could rapidly be implemented were support for families, increasing pensions and the tax reduction as per 1 January 2009, albeit the latter also has a delay before any effect can be felt. The effect itself is also reduced by saving. Government expenditure on structural issues, such as training and energy saving, remained low in many countries.

In such a situation the question arises how shocks can be avoided in the first place (cf. Aiginger, 2009; Cooper, 2008; Goldman Sachs, 2009; Hahn, 2008; Taylor, 2009) or how structures can be created which are more resilient. Ideally, we look for economic policies which foster economic stability, but at the same time growth, structural and environmental change.

Resilience should not be an isolated economic goal but should be integrated as an additional important constraint into growth and employment strategies. Micro economic change and fulfilling social goals must complement each other. The contribution of private firms and of an economic policy which is growth and stability orientated, are both indispensable and indeed support each other.

Economic resilience should be achieved through five channels (or policy areas), namely (i) more resilient structures (ii) increasing economic growth (iii) more emphasis on longer term goals (by firms, analysts and economic policy) (iv) avoiding factors

which actually cause economic crises (v) institutions and incentive schemes which serve to stabilise the economy.

In these five broad policy areas, 23 different strategies have been presented, although this list is not exhaustive. Not all strategies are achievable without negative side-effects and costs. Specifically, not all strategies to foster economic resilience are achievable without negative effects on growth. Some demand a similar policy to be followed in other countries/regions and at an international level. Table 1 reports on the feasibility of economic policy to influence a strategy, the side effects of the strategies on growth and competitiveness and their ability to be implemented on a national level. No strategy should be followed, which leads to less openness and protectionism, since protectionism costs growth and jobs. The negative effects for the dynamic of the economy of some of the strategies need to be compensated for by integrating special growth strategies into the overall strategy. In this way higher growth and employment could ideally be combined with greater stability.

The European (and Austrian) socio-economic model offers a foundation for a more resilient structure, since it is less biased towards short run goals, regulation and governance does not rely on prices only, and financial innovations and speculation does not play a similar role as in the US. Performance would increase if the European countries avoid cementing existing structures in production, regulation and the public sector. It is not less change but rather adapting more proactively to the future and open structures plus providing buffer stocks which bring more security and dynamism in the long run.

Table 1

Strategy Elements to Increase Resilience: Feasibility and Side Effects

		Controlable by economic policy	Growth effect	Cost effect	National possible/ only international
Policy Area 1: More Resilient Economic Structures					
Strategy 1:	Upgrading the industrial structure	difficult	positive	–	national
Strategy 2:	Regional diversification of exports	somewhat	rather positive	–	national
Strategy 3:	Build in buffer and avoid lock-in	partly (stocks)	negative	increasing	rather international
Strategy 4:	Strengthening automatic stabilisers	yes	rather negative	–	national
Policy Area 2: Increasing Economic Growth					
Strategy 5:	Investing into the future	yes	positive	short-term increasing/ long-term decreasing	national
Strategy 6:	Directing the public sector towards growth	yes	positive	short-term increasing	national
Strategy 7:	Projects with a dual purpose, high employment and growth effects	yes	yes	short-term increasing	national
Policy Area 3: Emphasising on Longer Term Goals					
Strategy 8:	Measure performance over the long term	partly	rather positive ?	increasing?	international
Strategy 9:	Start-ups	somewhat	positive	increasing	national
Strategy 10:	Anti cyclical wage policy	partly	?	private increasing	rather international
Strategy 11:	Thinking more long-term (European model)	marginal	rather positive (?)	rather increasing	international
Policy Area 4: Avoiding a Crisis					
Strategy 12:	Smart regulation	yes	positive	–	international
Strategy 13:	Work against the pro cyclical nature of R&D expenditure	yes	positive	public increasing	national
Strategy 14:	More critical evaluation of mergers and company size	yes	?	short-term increasing	international
Strategy 15:	Tax financial transactions, evaluate financial innovations, reduce speculation	yes	rather positive (?)	slightly increasing	only international
Strategy 16:	Deleveraging and a more stable shareholder structure	marginal	rather positive (?)	increasing	rather international
Strategy 17:	More regionalisation	somewhat	negative	increasing	national (limited)
Policy Area 5: Crisis Stabilising Institutions					
Strategy 18:	Budget surplus before a crisis	yes	short term/ long term	?	national
Strategy 19:	Construction ready projects	yes	yes	positive	national
Strategy 20:	Supporting firms with a viable business model only	somewhat	yes	slightly increasing	national
Strategy 21:	Innovative solutions to limit unemployment	rather yes	yes	positive	national
Strategy 22:	Experience rating	yes	–	decreasing	national
Strategy 23:	Broader company goals, trust and for distribution	difficult	positive?	short-term increasing/ long-term neutral	also national

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Small Open Economies and the International Financial Crisis: Any Lessons to Be Learnt?

The unfolding of the international financial crisis which erupted in full after the collapse of Lehman Brothers in September 2008 had a strong impact on a range of small open European economies. Some of these were Western European economies, such as Iceland and Ireland, which were strongly involved in the international banking crisis per se, often also characterised by strong prior residential asset price inflation. The other group of small, open economies consisted of the economies of Central and Eastern European Countries (CEECs). Their banking systems were initially judged as not being directly linked to the sub-prime mortgage and securitisation processes which had sparked the financial crisis in the United States and in other financial centers. Finally, there were those economies which were strongly linked through close banking relationships to the economies of Central and Eastern Europe; this group encompasses countries such as Austria and Sweden.

What were the features which characterised developments in small, open economies before and during the crisis? Which lessons can be learnt from these experiences?

What is clear from developments in the build-up to the crisis and during the crisis is that small, open economies are in a number of ways particularly vulnerable to the types of shocks which the international financial crisis generated. We shall go over some of the issues which single out the specific vulnerability of small open economies.

(i) Small Open Economies as Locations for Internationally Operating Banks:

Small open economies might become important locations of internationally operating financial institutions which evidently happened to Iceland, Switzerland, but also to Austria and Sweden in relation to their banks operations in Central and Eastern Europe. There is a priori no reason that this should not be the case as location factors (skills, geographic location, etc.) could favour such countries and in an integrated European market such location does not need to be discouraged. The problem, of course, arises when there are suddenly increased probabilities of insolvency appearing in the wake of a crisis and such – relatively large – financial institutions are backed only by national (monetary and fiscal) authorities. The discrepancy between national regulation as well as nationally defined fiscal authorities in the current set-up of the European Union, on the one hand, and the trans-border reaches of the activities of the bigger European financial institutions, on the other hand, can cause severe problems and sub-optimal outcomes.

One of the results of the current crisis will be to strengthen the intra-European cooperation between financial regulatory authorities, although the prospects of joint fiscal responsibility in the case of bail-outs are very slim. This creates also another problem: as long as national authorities are responsible for bank rescue operations, it will continue to be the case that the definition of what constitutes a *systemically relevant financial institutions* will be done with a view of the national spillover effects

and not overall European spillovers. Given that the Single Market is fully integrated this would be the wrong definition and would lead to a too generous definition of the range of *systemically relevant institutions*.

(ii) Small Open Economies as Net Borrowers:

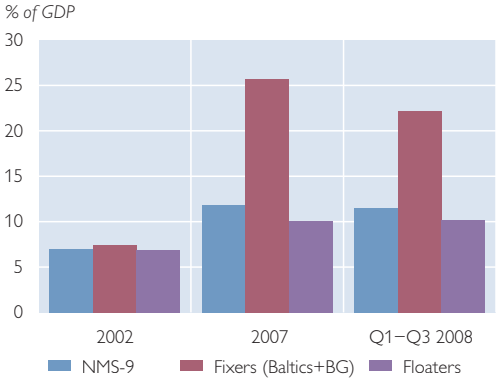
In a significant number of *emerging European economies* in Central and Eastern Europe we have seen a very strong increase in the debt levels of the private sector prior to the crisis. Public debt levels had (with the exception of Hungary), on the other hand, declined to quite low levels due to the fast growth period leading up to the crisis. Hence, the main vulnerability with regard to debt was the strong accumulation of debt in the private sector. Why has this taking place?

A careful analysis shows that the build-up of private debt was particularly strong in countries which had, in different ways, adopted a fixed exchange rate regime: such regimes ranged from complete Euroisation (Montenegro, Kosovo) to Currency Boards (Bulgaria and some of the Baltic states) to various forms of *hard* or *soft* pegs (e.g. Croatia). Amongst the most recent EMU Member States (Slovenia and the Slovak Republic), Slovenia also experienced fast rising private sector debt prior to the crisis. There were also instances of very rapid build-up of private sector debt in some of the other economies (such as Romania) but in general the group of *fixers* had a more dramatic build-up of private debt (a high proportion of which was denominated in foreign currency) than the *floaters* (see chart 1).

What was the reason for the very rapid increase of foreign, private debt, particularly in the case of the *fixers?* I would mention three such reasons:

Chart 1a

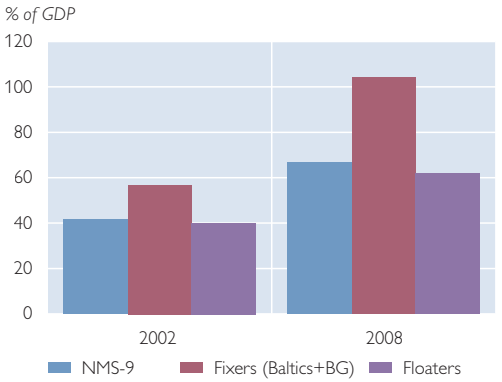
Net Capital Inflows (Surplus on the Capital Account and Financial Account of the Balance of Payments without Reserves)



Source: wiiw database incorporating national statistics, Eurostat.

Chart 1b

Gross External Debt



Source: wiiw database incorporating national statistics, Eurostat.

– The first reason applies both to *fixers* and *floaters* and accounts for the fact that foreign debt vulnerability in the recent crisis was particularly high in Central and Eastern European economies as compared to other *emerging market economies* (e.g. in Latin America or in Asia). This is due to the rather successful anchorage of the CEECs in the European (economic, political and institutional) integration process. Such anchorage reduces the risk for international investors and internation-

ally operating banks so that – ceteris paribus – they would be willing to extend credit to a wider range of customers (and invest in a wider range of projects) than in economies in which such anchorage does not exist or to a lesser degree. Furthermore, the prospects of EMU membership (and the accompanying technical assistance in conducting monetary policy on the way to such membership) reduced the risk of exchange rate volatility (if at all it would provide a reason for an upward pressure on the exchange rate) and hence lenders were substantially discounting the risk of exchange rate devaluation.

– Catching-up in financial intermediation: This is a common argument for the rapid rise of private sector debt and was used by bank managers to justify the extraordinarily strong build-up of private sector debt in some of the CEECs. Transition economies are laggards in the process of financial intermediation and, in level terms, the private sector debt to income ratios have in most economies not yet reached the Western European levels. However, first of all such arguments do often not compare levels of financial intermediation for the same levels of economic (real income) development and, secondly, there was clear evidence in some of the economies of a speculative loop between credit expansion and residential asset prices.
– There are special incentives for small open economies to become *fixers:* In small open economies which have given up any form of capital controls (which all CEECs with either EU membership or membership aspirations have done), the fear of either making monetary policy mistakes or suffer the impact of changing risk assessment in the form of exchange rate stability, leads many of the CEECs to become *fixers*. The incentives are stronger if the country is *small* as the impact of destabilizing capital movements and ensuing exchange rate volatility would be greater than in a larger economy. Furthermore, the weight of interest groups (multinationals who organise international production networks, companies with high levels of international transactions) which find exchange rate fluctuations costly in transactions terms is greater in smaller than in larger economies. Hence, smaller, open economies (and those in which monetary authorities were not able to build up sufficient reputation) are more likely to be fixers.
– Once countries are in a fixed exchange rate regime, the scene is set for higher capital inflows, higher indebtedness of the private sector and structural current accounts deficits. The reason is that – ceteris paribus

– there are no exchange rate risks (except in an extra-ordinary period of shock) and hence there is much reduced need for hedging. An international financial crisis such as the one we have witnessed has very low

probability at any one point of time and hence bankers give a very low weight to this risk. With *floaters*, exchange rate risk persists and hence international financial institutions operate with more caution.

High capital inflows in fixed currency countries can lead to asset price bubbles and fast increases in private sector debt. Once a big international shock in the form of increased risk assessment with respect to *emerging markets* (whose fiscal authorities are perceived as less potent with lower access to international financial markets) hits such economies, the high degree of security about sustainability of the exchange rate regime can quickly disappear and then the fear of a much higher level of private sector default emerges. A devaluation would make *currency mismatch* apparent and the level of *bad debt* can mount dramatically. A capital flight out of such markets (or *sudden stop*) can be the consequence. Without international efforts the fixed exchange rate regime would collapse.

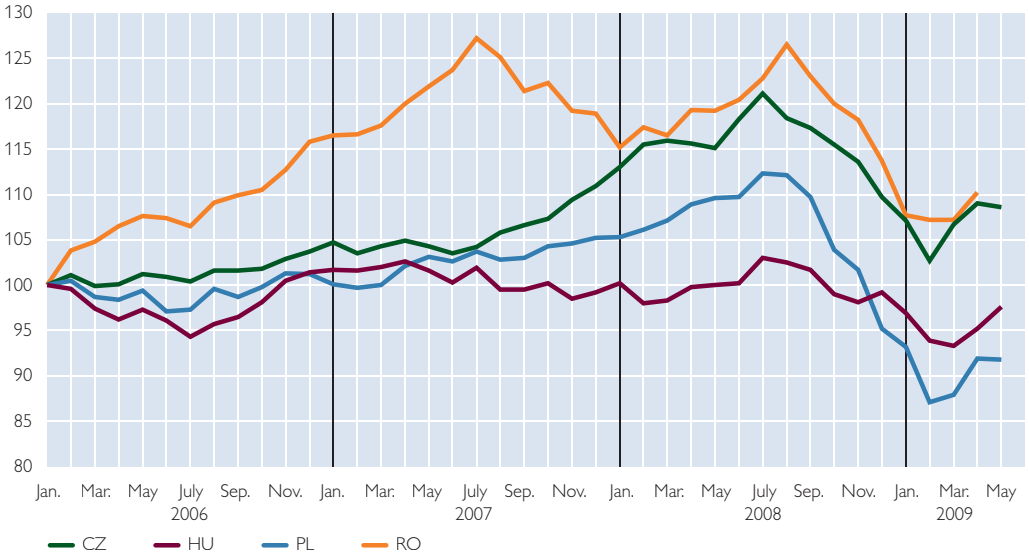
One should point to one additional element in this story: once a scenario of a break-down of a fixed currency regime is perceived as a possible scenario, even countries with very low initial public debt levels (as was the case with the Baltics or Bulgaria) are seen as risky with regard to potential public debt. The reason is that the high risk of default of private debt gets devolved to be seen as potential public debt risk, as national fiscal authorities would be seen as having to step in to avoid mass bankruptcy. To a lesser extent, this fact also constrains the room of manoeuvre of fiscal authorities in flexible exchange rate economies (*flexers*) where the impact of a devaluation also increases the likelihood of private sector defaults which puts a strain on the financial system and the national authorities would be seen as having to step in in case of a systemic breakdown of the financial system; thus private debt would become – to some extent – public debt and hence the fear in international financial markets of potentially fast rising public debt levels would prevent such economies to place public debt papers. This mechanism was at work throughout the CEE region in the course of the crisis and prevented almost all of them to undertake active counter-cyclical fiscal policies in line with those which were undertaken in Western Europe, the USA, Japan and China.

To sum up: the current international financial crisis has shown that small open economies are particularly vulnerable to shocks which lead to a reassessment of emerging market risks. Particularly countries with fixed exchange rate regimes will undergo a dramatic re-evaluation, especially since they are more prone to a fast increase of private sector debt levels (plus potential real estate bubbles) prior to the crisis.

Chart 2a

Real Exchange Rate Developments from 2006 to 2009 Euro/National Currency Unit – PPI Deflated[1]

January 2006 = 100



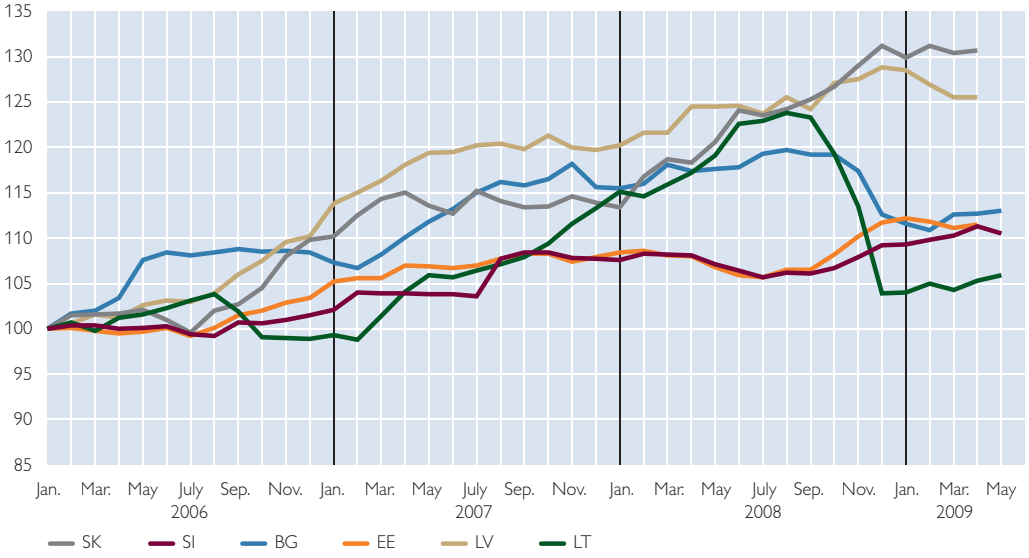
Source: wiiw monthly database incorporating national statistics.

[1] Values over 100 indicate appreciation relative to January 2006.

Chart 2b

Real Exchange Rate Developments from 2006 to 2009 Euro/National Currency Unit – PPI Deflated[1]

January 2006 = 100



Source: wiiw monthly database incorporating national statistics.

[1] Values over 100 indicate appreciation relative to January 2006.

This severely constrains their ability to counter-act the crisis through fiscal means and, should they attempt to maintain their fixed exchange rate regime, the entire brunt of adjustment would have to be born by an adjustment of real income levels as the possibilities for real exchange rate adjustment is very limited in periods in which global inflation rates are close to zero (see chart 2 on real exchange rate developments in fixed and flexible exchange rate economies).

As to lessons to be learnt from this crisis, we would single out three:

– There is a need of adding effective regulatory measures to constrain the build-up of private sector debt levels in catching-up economies, especially those with fixed currency regimes.
– The cost-benefit calculation of fixed exchange rate regimes in European catching-up economies should be reassessed; this includes the analysis of the path and accompanying policies for eventual EMU membership.
– There is a need to counteract potential *negative spill-over* effects of bank rescue operations from fiscally stronger Western European economies and euro area Member States on *emerging Europe*. The latter is perceived as being fiscally weaker and hence significant support mechanisms (such as a *Stabilisation Fund*) should be set up at the European level.

Podiumsdiskussion II:
Bankenhilfspakete: Erfahrungen Österreichs und erste Lehren für die Zukunft

Panel II:
Bank Rescue Packages: The Austrian Experience and Lessons for the Future

Helmut Ettl

Vorstand der österreichischen Finanzmarktaufsicht

Bankenpaket und Krisenbewältigung im internationalen Kontext: Regulatorische „Lessons Learned“

Die weltweit und auch in Europa bereitgestellten staatlichen finanziellen Hilfen für Kreditinstitute trugen wesentlich zur dringend notwendigen Stabilisierung der Finanzmärkte bei. Ohne diesen Beistand wäre ein Kollaps am Höhepunkt der Krise im Herbst 2008 nicht auszuschließen gewesen. Im Folgenden werde ich auf die mittel- und langfristigen Auswirkungen der Bankenpakete eingehen und Schlussfolgerungen für Finanzmarktregulierung und –aufsicht ziehen.

Am 14. September 2008 suchte die US-Investmentbank Lehman Brothers um Gläubigerschutz an. Die darauf folgenden Turbulenzen auf den Finanzmärkten drohten das Weltfinanzsystem zum Einsturz zu bringen. Auf einem für 12. Oktober 2008 eilig einberufenen Gipfel in Paris verpflichteten sich die Regierungschefs der Euro-Gruppe unter Einbeziehung des Vereinigten Königreichs auf einen weitreichenden Aktionsplan zur Stabilisierung der Bankenindustrie in Europa. Die beteiligten Länder setzten sich das Ziel, systemrelevante Banken vor dem Zusammenbruch zu bewahren und in Schwierigkeiten geratene Institute durch Finanzhilfen zu stützen.

Damit wurde offiziell klargestellt: für systemrelevante Banken besteht in jedem Fall ein Auffangnetz. Nun steht diese Ankündigung unter dem Vorbehalt ausreichender Staatsbonität – diese könnte die internationale Staatengemeinschaft mittels ihrer bestehenden Finanzinstitutionen jedoch zuverlässig garantieren.

Wie werden sich aber nun die für Banken getroffenen Unterstützungsmaßnahmen mittel- und längerfristig auswirken? Welche Schlussfolgerungen können für Aufsicht und Regulierung aus diesen Paketen gezogen werden?

Wenn es um die Frage der Rücknahme der direkten Staatsinterventionsmaßnahmen im Bereich der Refinanzierung und Eigenkapitalunterstützung geht, scheint diese eher rein technischer Natur zu sein, welche sich mittels eines klar durchdachten Ausstiegsszenarios leicht lösen lässt. Anders verhält es sich jedoch beim expliziten Ausschluss der Möglichkeit von Konkursen systemrelevanter Kreditinstitute. Eine derartige Garantie führt zu einer längerfristigen Veränderung der Anreizstrukturen sowohl auf Seiten der Investoren als auch des Bankmanagements. Sie schafft eine Problematik, die sich vermutlich am besten mit dem englischen Begriff Moral Hazard beschreiben lässt. Eine so weitgehende Garantiezusage lässt sich nicht einfach rückgängig machen. Ein Widerruf der expliziten Staatsgarantie wäre kurz- und mittelfristig auf keinen Fall glaubwürdig darstellbar. Birgt dieses Problem aber bereits die Grundlage einer nächsten Krise, indem Investoren unbeschränkt Liquidität zur

Verfügung stellen und Banken übermäßige Risiken eingehen?

Keineswegs, wenn die richtigen regulatorischen Lehren gezogen werden. Neue Spielregeln sind erforderlich, die

mittels einer klaren Regulierung festgeschrieben und durch starke Aufsichtsinstitutionen durchgesetzt werden müssen. Große, systemrelevante Bankengruppen müssen künftig einer engmaschigen Regulierung unterworfen werden. Wichtiges Element dieses Netzes ist nicht nur eine Begrenzung der Leverage Ratio etwa mittels eines Leverage Cap. Übermäßige Risikoübernahme durch systemrelevante Kreditinstitute kann durch Einschränkungen von zu komplexen Geschäftsfeldern verhindert werden.

Die Eigenmittelquote sollte über den Zyklus gerechnet werden. Über den Zyklus bedeutet insbesondere, dass der Aufbau von Eigenmitteln nicht erst während der Krise erfolgt. Wir sind derzeit mit drei prozyklischen Treibern konfrontiert: erstens mit dem starken Verlangen der Marktteilnehmer nach Kernkapitalquoten von 8% bis 9% während der Krise und zweitens mit dem massiven Ansteigen der risikogewichteten Aktiva, gefördert durch die gegenwärtige Eigenkapitalregulierung. Dies wird nicht zuletzt durch das Verhalten der Ratingagenturen verstärkt. Neben der Regulierung der Ratingagenturen sollte auch angedacht werden, inwieweit externe Ratingurteile in Zukunft zur Berechnung des Eigenmittelerfordernisses von Kreditinstituten herangezogen werden sollen. Als dritter Treiber wirkt das Fair-Value-Accounting, das ebenfalls grundlegend überdacht werden muss.

Um eine effiziente Regulierung tagtäglich durchzusetzen, sind starke Aufsichtsinstitutionen notwendig, die hinreichend durchsetzungsfähig sind, systemrelevante bzw. grenzüberschreitend tätige Finanzinstitutionen beaufsichtigen zu können. Das Europa des freien Waren-, Dienstleistungs- und Kapitalverkehrs benötigt aus diesem Grund nicht nur klare Regeln des Burden-Sharings im Fall der Rekapitalisierungsnotwendigkeit von grenzüberschreitenden Kreditinstituten, sondern vor allen Dingen ein starkes System einer europäischen Finanzmarktaufsicht. Analog zum Europäischen System der Zentralbanken (ESZB) müssen für grenzüberschreitende Finanzinstitute verbindliche Beschlüsse auf europäischer Ebene getroffen werden. Ein immer noch relativ loses Zusammenarbeitsmodell der Aufsichtsbehörden, wie es derzeit von der Europäischen Kommission vorgeschlagen wird, wird auf lange Sicht zu kurz greifen. Schließlich haben sich nationale Aufsichtsbehörden primär vor nationalen Parlamenten und Gerichten zu verantworten. Daher liegt es in ihrem Interesse, in erster Linie den Schaden für das eigene Land zu minimieren. Dies führt im Fall der Beaufsichtigung grenzüberschreitender Finanzinstitute zu suboptimalen Ergebnissen. Im derzeit bestehenden System werden vor dem nunmehrigen Erfahrungshintergrund Aufseher aus nationaler Sicht verstärkt darauf achten, dass Tochterinstitute ausländischer Bankengruppen als Voll-

banken erhalten bleiben und eine Stand-Alone-Überlebensfähigkeit unabhängig von der Entwicklung des Mutterinstitutes behalten. Grenzüberschreitenden Divisionalisierungsbestrebungen wird damit Einhalt geboten. In diesem Lichte erscheinen die von der Arbeitsgruppe rund um Jacques de Larosière vorgelegten Vorschläge, auf denen die Europäische Kommission derzeit aufbaut, zwar als Einstieg in die Entwicklung einer europäischen Aufsicht gut geeignet, für ein Europa des Binnenmarktes allerdings nicht weitreichend genug.

Viele Reformvorschläge zur Beaufsichtigung und Regulierung der Finanzmärkte werden derzeit auf Ebene der G-20 und der Europäische Union debattiert. Es bleibt zu hoffen, dass unter dem Eindruck der Erfahrungen mit der derzeitigen Krise auch weitreichende Beschlüsse gefasst werden.

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Das österreichische Bankenpaket – Design, Herausforderungen und erste Lehren aus der Umsetzung

Krisen meistert man bekanntlich am besten, indem man ihnen zuvorkommt. Dass dies nicht immer gelingt, zeigt sich angesichts der aktuellen Finanzmarktkrise und deren realwirtschaftliche Implikationen. In derartigen Fällen ist es erforderlich, durch aktives Krisenmanagement zumindest die Auswirkungen der krisenhaften Entwicklungen möglichst gering zu halten, die Funktionsfähigkeit der systemrelevanten Einrichtungen zu sichern und möglichst rasch wieder eine Stabilisierung zu erreichen.

Vor diesem Hintergrund haben die Staats- und Regierungschefs des Euroraums am 12. Oktober 2008 bei einem Gipfeltreffen in Paris einen konzertierten Aktionsplan beschlossen, um das Vertrauen in das Finanzsystem und dessen möglichst reibungslose Funktionsfähigkeit wiederherzustellen. Im Zentrum dieses Aktionsplans standen die Vorhaben zur Stabilisierung der Banken, aber auch anderer Finanzintermediäre. Vordringlich galt es, gefährdete systemrelevante Institute zu rekapitalisieren. Darüber hinaus zielte der Plan angesichts der Auswirkungen der Finanzmarktkrise auf eine generelle Stärkung der Eigenkapitalbasis von systemrelevanten Banken ab, um die Kreditvergabe an Unternehmen aufrechtzuerhalten. Mit Hilfe von Garantieübernahmen für Bankenanleihen sollten schließlich die Refinanzierungsbedingungen der Kreditinstitute verbessert werden. In diesem Kontext sei auch auf die liquiditätsstärkenden Maßnahmen der Europäischen Zentralbank (EZB) zur Wiederbelebung des Interbankenmarkts sowie auf die Entscheidung des ECOFIN-Rats, die Einlagensicherung in den EU-Mitgliedstaaten auf mindestens 50.000 EUR und in einem weiteren Schritt auf 100.000 EUR anzuheben, hingewiesen.

Die EU-Kommission hat in weiterer Folge hinsichtlich der konkreten Ausgestaltung der auf nationaler Ebene umzusetzenden Bankenrettungs-, bzw. -unterstützungspakete Leitlinien vorgelegt, die vor allem darauf ausgerichtet sind, wettbewerbsverzerrende Effekte zu vermeiden. Diese Leitlinien sehen unter anderem eine Gewährung der Unterstützung für Banken zu Marktkonditionen, eine zeitliche Befristung der Maßnahmen sowie die Sicherstellung des Zugangs der in den jeweiligen Mitgliedstaaten aktiven ausländischen Banken zu den nationalen Hilfen vor.

Die österreichische Bundesregierung hat vor diesem Hintergrund rasch reagiert und bereits am 13. Oktober 2008 die Eckpfeiler des österreichischen Bankenpakets im Umfang von 100 Mrd EUR skizziert. Dessen Kernelemente stellen sich wie folgt dar:

- Liquiditätsunterstützung inklusive Reaktivierung des Interbankenmarkts (75 Mrd EUR[1])
- Kapitalunterstützung (15 Mrd EUR)
- Erhöhung der Einlagensicherung (10 Mrd EUR)

Mit diesem Maßnahmenpaket sollte sichergestellt werden, dass die österreichischen Banken unter den gleichen Wettbewerbsbedingungen wie ihre ausländischen Mitbewerber tätig sein können und in die Lage versetzt werden, ihre Kreditgewährungsfunktion

[1] *Später erfolgte eine Umwidmung von 10 Mrd EUR für Unternehmenshaftungen (siehe auch nachfolgend).*

auch im Zuge der Finanz- und Wirtschaftskrise aufrechtzuerhalten.

Insgesamt 19 EU-Mitgliedstaaten haben solche Maßnahmenpakte geschnürt, das zugesagte Volumen beläuft sich auf etwa 2.800 Mrd EUR, das entspricht ungefähr 22 % des Bruttoinlandsprodukts (BIP) der EU. Davon werden etwa 300 Mrd EUR für die Rekapitalisierung von Banken und rund 2.500 Mrd EUR für staatliche Garantien zur Verfügung gestellt. Im Vergleich dazu ist das österreichische Bankenpaket mit 90 Mrd EUR (exklusive 10 Mrd EUR Einlagensicherung), was circa 32 % des BIP entspricht, auf den ersten Blick überdurchschnittlich umfangreich.

Die Dimensionierung des österreichischen Pakets hat zunächst Kritik evoziert, doch hat sich die Vorgangsweise im Lichte der inzwischen eingetretenen realwirtschaftlichen Entwicklungen als sehr vorausschauend erwiesen. Das vorgesehene Volumen des Bankenpakets gewährleistet, dass auch angesichts der zwischenzeitlich eingetretenen weiteren Verschlechterung der wirtschaftlichen Lage entsprechender Spielraum und Handlungsmöglichkeiten existieren. Im Unterschied zu manchen anderen Ländern waren daher bis dato auch keine weiteren Aufstockungen erforderlich.

Nachfolgend sollen nun die Eckpunkte des österreichischen Bankenpakets näher erläutert werden.

Liquiditätsunterstützung inklusive Reaktivierung des Interbankenmarkts

Ursprünglich waren für liquiditätsunterstützende Maßnahmen 75 Mrd EUR vorgesehen, augrund einer Umwidmung von 10 Mrd EUR (Haftungsrahmen für mittlere und große Unternehmen) verbleiben nunmehr 65 Mrd EUR. Darunter fallen die Errichtung der Oesterreichischen Clearingbank AG (OeCAG) und die Garantieübernahme für Wertpapier-Emissionen von Banken. Mit diesen Maßnahmen war das Ziel verbunden, den Interbankenmarkt, der infolge des Zusammenbruchs der US-Investmentbank Lehman Brothers praktisch zum Erliegen gekommen war, wieder zu beleben sowie die Refinanzierungsbedingungen für die Banken zu verbessern.

Da die Etablierung einer Clearingstelle in der EU eine Besonderheit darstellt,[2] soll die Ausgestaltung der OeCAG sowie ihr Geschäftsmodell detaillierter beschrieben werden.

[2] *Neben Österreich gründete nur noch Italien eine Clearingstelle.*

Kasten 1

Die Oesterreichische Clearingbank AG (OeCAG)

Die Geschäftstätigkeit der Oesterreichischen Clearingbank AG basiert auf § 1 Abs. 1 bis 3 des Interbankmarktstärkungsgesetzes (IBSG) (BGBl. I 136/2008). Die OeCAG steht im Eigentum der österreichischen Kreditinstitute, wobei die Sektoren über ihre Spitzeninstitute vertreten sind. Die Beteiligungsquoten wurden ex-ante im Rahmen von Verhandlungen festgelegt.

Die operative Geschäftsdurchführung erfolgt durch die Oesterreichische Kontrollbank AG (OeKB). Die Eigenmittel der OeCAG betragen 180 Mio EUR. Ihr Geschäftsvolumen ist mit maximal 10 Mrd EUR begrenzt, wobei nach einer Evaluierungsphase eine Aufstockung möglich ist. Das Einlagen- und Kreditgeschäft der OeCAG steht allen Banken und Versicherungen offen; bei der Zeichnung der Emissionen der OeCAG bestehen keine Beschränkungen.

Die Mittel können seitens der teilnehmenden Banken durch Einlagen sowie durch eigene Wertpapieremissionen der OeCAG bereitgestellt werden. Das Matching zwischen Einlagenangebot und Kreditnachfrage über fixe Laufzeiten (vor allem drei und sechs Monate) erfolgt in Form regelmäßiger Auktionen, in deren Rahmen beide Marktseiten ihre Preis- und Mengengebote abgeben. Transaktionen kommen dort zustande, wo die Kreditnachfrage zu einem Preis erfolgt, zu dem auch Angebote auf der Einlagenseite bestehen. Allfällige Emissionserlöse der OeCAG werden zu 50 % entsprechend der Eigenkapitalquote und zu 50 % durch Auktion an die Banken verteilt.

Für die Emission kurzfristiger Wertpapiere seitens der OeCAG kann bis 31. Dezember 2009 eine Haftung des Bunds als Bürge und Zahler bis zu einem Gesamtvolumen von maximal 5 Mrd EUR vereinbart werden. Die Laufzeit der Emissionen beträgt längstens ein Jahr. Zusätzlich besteht für die OeCAG eine Bundeshaftung für einen Forderungsausfall in Höhe von maximal 4 Mrd EUR. Bei einem Forderungsausfall, der zu einer Unterschreitung des Mindesteigenmittelerfordernisses der Clearingstelle führt, ist zunächst eine Mittelzufuhr durch den Bund bis zum Wiedererreichen der 8-Prozent-Eigenmittelquote vorgesehen, in Verbindung mit der Abtretung der ausgefallenen Forderungen durch die Clearingstelle an den Bund. Dadurch erhält die OeCAG de facto den Charakter einer ausfallsicheren Central Counterparty. Die OeCAG hat ihre Leistungen gegen marktkonformes Entgelt zu erbringen. Zusätzlich beträgt das Haftungsentgelt für die Bundeshaftungen 50 Basispunkte, die auf die Kreditzinsen aufgeschlagen werden.

Bis Anfang Juni 2009 haben rund 170 Auktionen mit einem insgesamten Zuteilungsvolumen in der Höhe von 6,6 Mrd EUR stattgefunden.

Maßnahmen zur Stärkung des Eigenkapitals

Im Rahmen des Finanzmarktstabilitätsgesetztes (FinStaG) kann der Bundesminister für Finanzen eine Reihe von kapitalstärkenden Maßnahmen setzen. Bis dato wurde vor allem auf das Instrument der staatlichen Zeichnung von Partizipationskapital von Kreditinstituten zurückgegriffen.

Bei der Festlegung der Bedingungen für die Gewährung von Partizipationskapital wird auf Basis der erfolgten beihilfenrechtlichen Genehmigung der Europäischen Kommission zwischen grundsätzlich wirtschaftlich gesunden („sound banks“) und nicht gesunden Kreditinstituten („distressed banks“) unterschieden. So verlangt der Bund von gesunden Kreditinstituten eine marktorientierte Vergütung in Form von Dividendenausschüttungen von mindestens 9,3 %. Diese Vergütung kann jedoch auf 8 % abgesenkt werden, sofern die Rückzahlung zu 110 % des Nennwerts erfolgt oder mindestens 30 % der Kapitalzufuhr von Privaten gezeichnet werden (davon maximal ein Drittel von bestehenden Aktionären). Sind letztgenannte Bedingungen erfüllt, entfällt auch die Dividendenbeschränkung für „Altaktio-

näre“ von 17,5 % des ausschüttungsfähigen Gewinns vor Rücklagendotierung für den Zeitraum der Inanspruchnahme staatlicher Hilfe. Für nicht gesunde Kreditinstitute ist eine marktorientierte Vergütung in Form von Dividendenausschüttungen von mindestens 10 % vorgesehen. Weiters gilt für diese ein absolutes Verbot von Dividendenausschüttungen an andere Aktionäre.

Zusätzlich müssen die Banken auch eine Reihe von weiteren Auflagen erfüllen, u. a. im Hinblick auf die Mittelverwendung, die Sicherstellung einer nachhaltigen Geschäftspolitik, etc.

Neben der Zeichnung von Partizipationskapital stehen dem Bundesminister für Finanzen noch weitere Instrumente zur Rekapitalisierung zur Verfügung, wie z. B. die Übernahme von Haftungen, die Gewährung von Darlehen oder den Erwerb von bestehenden Gesellschaftsanteilen. Als ultima ratio können auch Eigentumsrechte übernommen werden.

Sicherung der Spareinlagen

Im Maßnahmenpaket der österreichischen Bundesregierung zur Finanzmarktstabilität war auch ein signifikanter, zum Teil zeitlich befristeter, Ausbau der österreichischen Einlagensicherung vorgesehen. Rückwirkend mit 1. Oktober 2008 wurden Spareinlagen von natürlichen Personen zu 100 %, also in unbegrenzter Höhe, gesichert. Diese unbegrenzte Sicherung gilt bis Ende 2009, danach werden diese Einlagen bis 100.000 EUR gesichert sein. Auch für die Einlagen von Personen- und Kapitalgesellschaften, die bestimmte Größengrenzen erfüllen, wurde die Einlagensicherung von bisher 20.000 EUR für juristische Personen auf bis zu einer Höchstgrenze von jeweils EUR 50.000 (mit einem Selbstbehalt von 10 %) erhöht; im Einklang mit aktuellen legislativen Maßnahmen auf EU-Ebene wird die Mindestsicherung für juristische Personen ab 1. Jänner 2011 weiter auf 100.000 EUR erhöht werden.

Aktueller Umsetzungsstand:

- Bis April 2009 wurden Bankemissionen mit einem Volumen von rund 15,6 Mrd EUR durch den Bund garantiert.
- Eine Kapitalbereitstellung erfolgte bis zum gegenwärtigen Zeitpunkt an die Hypo Group Alpe Adria (HGAA), die Volksbanken AG (VBAG), die Erste Group Bank und die Raiffeisen Zentralbank Österreich (RZB), zum Teil in Kombination mit einer Partizipationskapitalzeichnung durch Private. Insgesamt wurden diesen Banken im Wege staatlicher Kapitalunterstützungsmaßnahmen bis jetzt rund 5,8 Mrd EUR zugesagt (davon entfallen auf: HGAA 900 Mio; VBAG 1 Mrd; RZB 1,75 Mrd; Erste Bank 2,7 Mrd, davon 540 Mio EUR privat platziert). Insgesamt erhöhte sich die Eigenmittelausstattung vorhin genannter Banken durch diese Maßnahmen – bezogen auf den Stichtag 31.12.2008 – um knapp 2 Prozentpunkte im Bereich Tier 1-Kapital, die Gesamteigenmittelquote erhöhte sich um rund 1,6 Prozentpunkte.
- Mit den beiden übrigen Top-6-Banken – der BAWAG P.S.K. und der UniCredit Bank Austria (BA) – wurde ebenfalls bereits verhandelt. Dabei wurde mit der BAWAG P.S.K. Ende April 2009 eine Grundsatzvereinbarung erzielt. Diese sieht Partizipationskapital in der Höhe von 550 Mio EUR sowie eine zusätzliche staatliche Garantie von 400 Mio EUR vor. Der BAWAG P.S.K.-Eigentümer soll vorab 205 Mio EUR zuschießen. Die Verhandlungen mit der UniCredit Bank Austria laufen noch.

Beobachtungen und erste Lehren

Die Oesterreichische Nationalbank (OeNB) steht in Hinblick auf ihr Mandat zur Sicherung der Finanzmarktstabilität und ihre Aufgaben im Rahmen der Bankenaufsicht seit Monaten de facto in täglichem Kontakt mit den heimischen Banken, um entsprechend rasch auf neue Entwicklungen reagieren und gegebenenfalls entsprechende Maßnahmen einleiten zu können.

Die OeNB war und ist zudem sowohl in das Design als auch vor allem in die Implementierung des österreichischen Bankenpakets sehr stark involviert. Insbesondere im Rahmen der Verhandlungen zwischen dem Bundesministerium für Finanzen und den Banken über staatliche Kapitalmaßnahmen kommt der OeNB aufgrund ihrer diesbezüglich vorgesehenen Gutachterfunktion eine bedeutende Rolle zu. Durch ihre Kompetenz für Bankenanalysen auf Mikro- und Makroebene kann die OeNB relativ rasch Einschätzungen darüber treffen, inwieweit sich makroökonomische Entwicklungen auf die einzelnen Banken auswirken können, was gerade im aktuellen Umfeld von großer Relevanz ist. Umgekehrt können auch Einschätzungen darüber gemacht werden, inwieweit Entwicklungen auf Einzelinstitutsebene Auswirkungen auf das Finanzsystem entfalten. Die Zusammenführung dieses Knowhows in einer Institution (der OeNB) war auch eines der wesentlichen Ziele der 2008 in Kraft getretenen Reform der Bankenaufsicht, deren Umsetzung vor dem Hintergrund und den daraus resultierenden Herausforderungen der gegenwärtigen Finanzmarktkrise aus Sicht der OeNB sehr zufriedenstellend verläuft.

Für die OeNB stellt sich vor diesem Hintergrund eine erste Zwischenbilanz zum Bankenpaket wie folgt dar:

Erstens erwies sich die umfassende Konzipierung des Bankenpakets als besonders wichtig, da dieses maßgeschneiderte Lösungen im Rahmen eines umfangreichen Sets an Instrumenten ermöglicht. Zweitens zeigte sich auch die bereits erwähnte Volumengestaltung für das Bankenrettungspaket als vorausschauend. Drittens hat sich gezeigt, dass es bei der Gestaltung der Bankenrettungspakete einer sehr ausbalancierten Vorgehensweise bedarf, um einen Ausgleich zwischen den verschiedenen Interessen zu finden. Als besondere Herausforderungen kristallisierte sich das Spannungsverhältnis zwischen der Sicherung der Stabilität der Finanzmärkte einerseits sowie der Vermeidung von Wettbewerbsverzerrungen andererseits heraus. In diesem Spannungsfeld war der Grat zwischen der Notwendigkeit entsprechender Auflagen und Regelungen für die betreffenden Banken bei gleichzeitiger Vermeidung zu hoher damit einhergehender Belastungen schmal.

Herausforderungen stellten sich jedoch nicht nur bei der Konzeption, sondern auch im Zuge der Implementierung:

– In Bezug auf die Eigenmittelausstattung der Banken gibt es seitens externer Institutionen sowie des Markts sehr, mitunter wohl zu hohe

Erwartungshaltungen. Künftig ist es sicherlich erforderlich, dass weltweit ein stärkerer Aufbau von Eigenmittel-Puffern der Banken erfolgt. Um die gegenwärtige konjunkturelle Entwicklung nicht noch zusätzlich zu belasten, kann dies jedoch sinnvollerweise erst in einer wirtschaftlichen Aufschwungphase erfolgen. Wichtiger erscheint in der gegenwärtigen Situation vielmehr die Transparenz der Eigenmittelausstattung. Wenn nachvollziehbar kommuniziert wird, welche Eigenmitteldecke welcher Risikomasse gegenübersteht, erübrigt sich die allgemeine und undifferenzierte Forderung nach höheren Eigenmittelquoten der Banken.

– Eine weitere Herausforderung stellten die sich nahezu täglich ändernden Bedingungen auf den Märkten sowie Prognosen über die künftige ökonomische Entwicklung dar. Dadurch sind auch Aussagen über die Auswirkungen dieser Entwicklungen auf die Banken mit Unsicherheiten behaftet.
– Auch die zyklischen Effekte der neuen Eigenmittel- und Rechnungslegungsbestimmungen erwiesen sich als bedeutsamer als erwartet, was naturgemäß zu einer weiteren Erhöhung des Eigenmittelbedarfs der Banken führt.

Deutlich wird bei diesen Punkten, dass sie primär durch eine gesamteuropäische Vorgangsweise zu adressieren sind – da die Krise generell gezeigt hat, dass die Bankenaufsicht in der EU verstärkt unter einer europäischen Perspektive wahrzunehmen ist.

Ausblick – Quo vadis?

Zusammenfassend lässt sich festhalten, dass das österreichische Bankenpaket die damit verbundenen Erwartungen und Ziele erfüllt. Es trug zu einer verbesserten Kapitalausstattung und damit einhergehend zu einer deutlich gestärkten Risikotragfähigkeit des österreichischen Bankensystems bei. Auch die Ausstattung der österreichischen Kreditinstitute mit Liquidität hat sich deutlich verbessert. Ob diesbezüglich weitere Maßnahmen erforderlich sind, wird von der zukünftigen makroökonomischen Entwicklung abhängen. Das Bankenpaket bietet jedenfalls noch entsprechenden Spielraum.

Abgesehen vom Bankenpaket gibt es allerdings noch eine Reihe weiterer Punkte, auf die das Augenmerk von Notenbanken und Aufsichtsbehörden in den kommenden Monaten zu lenken ist. Zu diesen gehören:

– Die US-Subprime-Krise hat gezeigt, dass auch regionale Regulierungslücken globale Auswirkungen haben können. Wir benötigen daher verstärkt einen globalen Regulierungsansatz, der der Internationalität des Finanzsektors gerecht wird. Parallel dazu gilt es, protektionistische Tendenzen hintanzuhalten.
– Ziel der Neuausrichtung globaler, supranationaler wie nationaler Finanzmarktregulierung muss die Senkung des Risikoniveaus im Finanzsektor sein. Es ist zwar charakteristisch für Banken und andere Finanzintermediäre, Risiko zu bündeln und zu transformieren, allerdings müssen die Risikonehmer in der Lage sein, das Risiko zu verstehen und zu managen.
– Krisenhafte Entwicklungen werden sich nie ganz vermeiden lassen, es gilt jedoch sicherzustellen, dass diese in Zukunft besser verkraftet werden können. Wie kann dies erreicht werden? Erstens ist hierbei sowohl auf Einzelbankebene wie auch im gesamten Bankensystem längerfristig eine höhere Eigenmittelausstattung herzustellen. Auf Einzelbankebene gilt es, dies insbesondere durch einen

entsprechenden Ausbau der sogenannten Säule 2, also der Beurteilung, ob sämtliche Risiken der Bank durch entsprechendes ökonomisches Kapital gedeckt sind, umzusetzen. Zur Verbesserung der Stabilität auf Systemebene sind zudem makroökonomische Entwicklungen verstärkt in die Einzelbankregulierung und -aufsicht einzubeziehen. Dazu gehört auch die Durchführung und Weiterentwicklung systemweiter Stresstests und die Berücksichtigung von deren Ergebnissen im Aufsichtsprozess.

– Mit der Senkung des Risikoniveaus einher geht auch die Notwendigkeit des sogenannten Deleveraging. Die Fremdverschuldungsquote einer Reihe von Finanzinstitutionen erreichte in den letzten Jahren ein zu hohes Niveau, sodass hier in den kommenden Jahren auf eine entsprechende Verringerung hinzuarbeiten ist. Zu diskutieren ist auch, wie mit Problemen wie „too big to fail" umzugehen ist – vor allem, wenn sich Konsolidierungstendenzen verstärkt ausprägen sollten. Sollen Institute, die diese Qualifizierung erreichen, zusätzliche Anforderungen erfüllen müssen oder soll es generell bestimmte Größengrenzen geben?
– Damit hängt auch die Frage des künftigen Geschäftsmodells der Banken zusammen. Wurde während der Krise bereits vom *Tod des Investment Banking* gesprochen, zeigt sich in den letzten Wochen, insbesondere in den USA die Wiederauferstehung der großen Investmenthäuser, die nur vorübergehend als normale Geschäftsbanken geführt wurden. Bei vielen österreichischen und europäischen Banken zeigt sich jedoch gleichzeitig, dass Überlegungen zur Redimensionierung hinsichtlich Größe und Art ihrer Produkte angestellt werden, die eher einen verstärkten Fokus in Richtung klassischer Refinanzierungsfunktion der Banken andeutet. Vorstellbar wäre eine zukünftige Vereinfachung der Produkte, welche jedoch unter Umständen von einer höheren Bepreisung von Bankdienstleistungen begleitet werden könnte.
– Letzteres würde bedeuten, dass der Aspekt der Nachhaltigkeit wieder verstärkt in den Bankensektor Einzug findet. Damit einher geht die Notwendigkeit, der Stakeholder-Perspektive neben dem in den letzten Jahren vielfach dominierenden Shareholder-value-Ansatz wieder eine stärkere Bedeutung einzuräumen.

Im Chinesischen gibt es ein Schriftzeichen, das sowohl Krise wie auch Chance bedeutet. Mit diesem Hinweis soll der Ernst der gegenwärtigen wirtschaftlichen Lage keinesfalls relativiert werden. Es steht außer Zweifel, dass es angesichts der krisenhaften makroökonomischen Entwicklungen und den daraus resultierenden Herausforderungen für die (wirtschafts-) politischen Entscheidungsträger zunächst vor allem darum geht, die Finanzmarkt- und Wirtschaftskrise mit aller Entschlossenheit zu bekämpfen, um möglichst rasch das Fundament für eine wirtschaftliche Erholung bauen zu können. Jedoch sollte die Krise auch zum Anlass genommen werden, aus globalen Fehleinschätzungen und Fehlentwicklungen zu lernen und nachhaltig strukturelle Verbesserungen im Interesse der Systemstabilität zu erzielen.

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Erste Group Bank AG

Das österreichische Bankenpaket im internationalen Vergleich

Was 2007 als Subprime-Krise in den USA begann, entwickelte sich seither zur ersten weltweiten Rezession seit Ende des Zweiten Weltkriegs. Sie führte zum Untergang einiger und dem Beinahe-Zusammenbruch etlicher anderer Banken, Versicherungen und Fonds. Zugleich wurden Schwachstellen der bisherigen Regulierungspraxis sowie der verwendeten Bilanzierungsregeln und Eigenkapitalerfordernisse sichtbar. Dass es in der Folge zu keinem Zusammenbruch des Weltfinanzsystems und zu keiner Weltwirtschaftskrise vom Ausmaß der 1930er-Jahre kam, verdankt sich mehreren international koordinierten Interventionen von Regierungen und Notenbanken der wichtigsten Industriestaaten.

Bankenhilfspakete weltweit

Für den Finanzsektor entscheidend waren die Bereitstellung staatlicher Mittel zur Rekapitalisierung von Banken und Versicherungen – bis hin zur (Teil-) Verstaatlichung einzelner Institute, weiters staatliche Garantien für neu emittierte Obligationen bis hin zur Erhöhung des Haftungsrahmens der jeweiligen Einlagensicherung. Ansonsten hätte sowohl der Vertrauensverlust der Einleger als auch der Abschreibungsbedarf der Finanzintermediäre zu so massiven Verlusten an Sicht- und Termineinlagen wie auch an Eigenkapital geführt, dass es zu einer viel größeren Zahl von Bank- und Versicherungsinsolvenzen gekommen wäre.

Die Zentralbanken reagierten mit einer starken Ausweitung der Bereitstellung von Liquidität, einer Substitution des Interbanken-Markts und einer drastischen Senkung der Leitzinsen. Hinzu kamen sogenannte *nichtkonventionelle* geldpolitische Maßnahmen. Alle genannten Aktivitäten sicherten bislang das fortdauernde Funktionieren nationaler wie internationaler Finanzmärkte und ihrer wichtigsten Akteure; sie konnten das Durchschlagen der Finanzkrise auf die Realwirtschaft jedoch nicht verhindern.

Der internationale Vergleich zeigt, dass die wichtigsten betroffenen Länder zwar im Wesentlichen dieselben Maßnahmen ergriffen, ihr *Mix* und ihr Gesamtumfang jedoch stark variieren (Grafik 1). Absolut am größten war bislang mit Abstand das US-Paket (6.600 Mrd USD), gefolgt von jenem Deutschlands (670 Mrd USD), des Vereinigten Königreichs (640 Mrd USD) und Frankreichs (490 Mrd USD). Gemessen an der gesamtwirtschaftlichen Leistung liegen die Pakete Belgiens und der Niederlande (53 % des BIP)[1] vor jenen der USA (46 % des BIP) und Österreichs (34 % des BIP).[2] Von den EU-Mitgliedstaaten in Ost- und Zentraleuropa brachte bislang nur Ungarn ein – vergleichsweise kleines – Bankenpaket auf den Weg, während Lettland die größte im inländischen Besitz stehende Bank verstaatlichte.

In den USA wurde ein Großteil der Mittel zur Ausgliederung problematischer Assets aus den Büchern von Banken und Versicherungen eingesetzt (TARP). Ähnliches gilt für die Schweiz. In den USA übernahm der Staat überdies die Kontrolle beim Versicherer AIG sowie bei den beiden großen

[1] *Belgien und die Niederlande werden hier gemeinsam analysiert, weil die Rettung von Fortis und ING (inklusive zurechenbarer ABN-AMRO-Anteile) gemeinsam erfolgte.*

[2] *Die Bankenpakete der Jahre 2008/09 werden zum BIP des Jahres 2007 in Relation gesetzt, weil dies das letzte Jahr vor der Krise war.*

Eigenheim-Finanzierern Fanny Mae und Freddy Mac.

In der Mehrzahl der westeuropäischen Länder überwiegen bei den „Paketen" die staatlichen Garantien für Bankobligationen sowie die erweiterte Einlagensicherung. Manche Länder hoben dabei die Grenzen der Einlagensicherung an, einige gaben – zumindest für Privateinlagen – eine unbegrenzte Garantie, unter anderem Deutschland und Österreich.

Darüber hinaus kam es in einer Reihe von Fällen zu (Teil-)Verstaatlichungen von Banken. Prominenteste Fälle waren die Royal Bank of Scotland und die Commerzbank, die Eigenheim-Finanzierer HBOS und Northern Rock sowie die Hypo Real Estate. In Österreich übernahm der Staat die Kontrolle bei der Kommunalkredit Bank.

Hauptziel staatlichen Handelns war in Europa und den USA allerdings nicht die Verstaatlichung von Banken und Versicherungen, sondern primär deren Rekapitalisierung. Einige Länder – etwa Italien – boten dies den in ihren Ländern operierenden Banken lediglich an, andere insistierten auf einer Verbreiterung der Eigenkapitalbasis – insbesondere das Vereinigte Königreich und die USA. Als Instrumente dienten dabei Kapitalerhöhungen durch Ausgabe junger Aktien und nachrangigem Kapital, wobei die meisten Staaten bereit waren, selbst Kapital zur Verfügung zu stellen.

Ein zusätzliches Instrument bildet die staatliche Haftung für privat platzierte Wertpapieremissionen von Banken. Einige Länder entscheiden sich dabei für zeitlich befristete Garantien sowohl für bestehende als auch für neu emittierte Obligationen, die meisten Länder garantieren hingegen nur Neuemissionen.

Die Maßnahmen von Regierungen und Notenbanken konnten den Zusammenbruch des Weltfinanzsystems verhindern und die angespannte Situation am Interbankenmarkt etwas entschärfen. Nicht verhindert werden konnte die sich anbahnende Rezession. Mit der Dauer der Krise wurden zudem Schwachstellen in der bisherigen Finanzmarktregulierung deutlich.

Das österreichische Bankenpaket

In Relation zur Größe des Landes beschloss Österreich ein sehr großzügiges Unterstützungspaket für seine heimischen Banken. Dabei ist allerdings zweierlei zu berücksichtigen: Zum einen sieht das österreichische Paket die Verwendung der zur Verfügung gestellten Mittel ausdrücklich auch für zentral-, ost- und südosteuropäische Tochterbanken vor. Zum anderen besteht – unter bestimmten Bedingungen – auch für mehrheitlich im ausländischen Besitz befindliche Banken die Möglichkeit, Unterstützung zu erhalten.[3]

In Summe umfasst das österreichische Bankenpaket Leistungen und Haftungen in Höhe von 90 Mrd EUR. Von dieser Summe entfallen 65 Mrd EUR auf Garantien für neu emittierte Obligationen.[4] Davon wurden bislang 24 Mrd EUR (bzw. 37 % des Rahmens;

[3] *Dies betrifft insbesondere die Bank Austria (im Besitz der italienischen Unicredit Group) und die Hypo Alpe-Adria-Bank AG (mehrheitlich im Besitz der Bayerischen Landesbank). In beiden Fällen üben die österreichischen Töchter Konzernzentralen-Funktionen für wesentliche Teile des Zentral-, Ost- und Südosteuropageschäfts der Mutterbanken aus.*

[4] *Weitere 10 Mrd EUR, die im Interbankmarktstärkungsgesetz (IBSG) für den Finanzsektor vorgesehen waren, wurden im Mai 2008 zugunsten staatlicher Garantien für Kredite von Großunternehmen auf Basis des Unternehmensliquiditätsstärkungsgesetzes (ULSG) umgewidmet.*

Stand Juni 2009) in Anspruch genommen.[5]

Weiteres wichtiges Instrument war die Hilfe bei der Emission von Partizipationskapital, das ganz oder teilweise vom Staat gezeichnet werden kann.[6] Dafür stehen in Österreich insgesamt 15 Mrd EUR zur Verfügung. Davon wurden bis Juni 2009 insgesamt 5,2 Mrd EUR in Anspruch genommen. Weitere Institute hatten eine Inanspruchnahme angekündigt (Tabelle 1). Für das stimmrechtslose, nicht wandelbare Partizipationskapital wurde bei der jährlichen Verzinsung eine Spanne zwischen 7% und 9,3% festgelegt. Im Prinzip beträgt die im Voraus fixierte Ausschüttung bis 2013 jährlich 9,3%. Sie kann jedoch auf 8% reduziert werden, wenn die Rückzahlung zu 110% des Nennwerts erfolgt oder wenn die emittierende Bank mindestens 30% des Partizipationskapitals bei privaten Investoren platzieren kann.[7]

Während der Inanspruchnahme staatlicher Hilfe besteht eine Ausschüttungsbegrenzung in Höhe von 17,5% des ausschüttungsfähigen Gewinns.[8] Ist die begünstigte Bank nicht in der Lage, Dividenden an ihre *Alteigentümer* auszuschütten, entfällt auch die Verzinsung des vom Staat und von Privaten gezeichneten Partizipationskapitals, ohne dass sich die endfällige Summe dadurch erhöht.[9] Falls das Partizipationskapital nach fünf Jahren nicht zurückgezahlt wird, erhöht sich die Verzinsung im 6. und 7. Jahr um jeweils 50 Basispunkte, im 8. Jahr um 75 Basispunkte und danach jedes Jahr um weitere 100 Basispunkte.[10]

Für Dividendenzahlungen an *Altaktionäre* besteht für den Zeitraum der Inanspruchnahme staatlicher Hilfe eine Ausschüttungsbegrenzung von 17,5% des ausschüttungsfähigen Gewinns vor Rücklagendotierung. Diese Begrenzung entfällt, wenn sich Private zu mehr als 30% an der Kapitalzufuhr beteiligt haben, solange wiederum von diesen 30% zu nicht mehr als einem Drittel von bestehenden Aktionären und zu mindestens zwei Drittel von Dritten gezeichnet werden.

Weiteres entscheidendes Instrument ist die Einlagensicherung. Dafür ist im österreichischen Bankenpaket ein Rahmen von 10 Mrd EUR budgetiert.

[5] *Interbankmarktstärkungsgesetz (IBSG). Bislang (Stand Juni 2009) nahmen die Erste Group Bank AG, die Hypo Alpe-Adria-Bank AG, die Kommunalkredit, die Österreichischen Volksbanken und die Raiffeisen Zentralbank Österreich AG Emissionsgarantien in Anspruch.*

[6] *Finanzmarktstabilitätsgesetz (FinStaG).*

[7] *Dabei wurde einschränkend festgelegt, dass von den ersten 30% der privat platzierten Emission zwei Drittel von Neu-Investoren gezeichnet werden müssen, die nicht bereits Aktionäre des emittierenden Instituts sein dürfen.*

[8] *Diese Begrenzung entfällt ebenfalls unter der bereits genannten Bedingung, dass von den ersten 30% der privat platzierten Emission 2/3 von Neu-Investoren gezeichnet wurden, die nicht bereits Aktionäre des emittierenden Instituts waren.*

[9] *Erster solcher Fall ist die HYPO GROUP Alpe Adria, welche für 2008 und voraussichtlich auch für 2009 keine Zinszahlungen an den Bund leisten wird.*

[10] *Insgesamt ist die Verzinsung jedoch nach oben „gedeckelt". Das Maximum liegt bei 10% plus 12-Monats-EURIBOR.*

Für Privateinlagen bei österreichischen Banken wurde sie per Oktober 2008 von 20.000 EUR auf den vollen Umfang der jeweiligen Sicht- oder Termineinlagen Summe angehoben. Diese Sicherung von 100% der Einlagen ist bis Ende 2009 befristet. Ab 2010 wird sich die Garantie auf Einlagen bis zu 100.000 EUR beschränken.[11] Hinzu kommt eine neue Sicherung für die Einlagen von Klein- und Mittelbetrieben. Dabei übernimmt der Staat die Entschädigung von den Einlagensicherungsverbünden, soweit die Leistungen im Einzelfall 50.000 EUR übersteigen.

Ausblick

Die nationalen Bankenpakete erfüllten bislang weitgehend ihren Zweck. Allerdings ist nicht klar, ob sie ausreichen werden. Denn in den Bilanzen der Banken und Versicherungen wurde bislang nur ein Teil der nicht werthaltigen Assets abgeschrieben. Schätzungen des IMF und anderer gehen von problematischen Assets und einem Abschreibungsbedarf aus, der größer ist, als die bereits erfolgten Abschreibungen. Dies betrifft etliche westeuropäische Geschäftsbanken, nicht zuletzt die deutschen Landesbanken.

Darüberhinaus gibt es eine Reihe von weiteren ungelösten Problemen. Im Mittelpunkt der Aufmerksamkeit steht dabei der starke Anstieg der Staatsverschuldung (Grafik 2), welcher sich sowohl durch etliche der getroffenen Maßnahmen zur Stabilisierung des Finanzsektors und zur Stimulierung der Realwirtschaft als auch durch krisen bedingte Steuerausfälle erklärt. Die von vielen geforderte Rückkehr zu den Verschuldungsniveaus vor der Krise würde in den kommenden Jahren eine deutlich restriktivere Budgetpolitik erfordern, was sich zukünftig wachstumsdämpfend auswirken dürfte. Die für Österreichs Finanzinstitute besonders relevanten Länder Zentral-, Ost- und Südoststeuropas werden davon allerdings nur wenig betroffen sein, weil ihr Verschuldungsgrad vor Ausbruch der Krise absolut und relativ zur Wirtschaftsleistung niedrig war[12] und auch 2013 deutlich unter den Niveaus westeuropäischer Länder liegen wird.

Aus makro-ökonomischer Sicht problematisch sind die großen Ungleichgewichte zwischen Volkswirtschaften mit großen Leistungsbilanzdefiziten und solchen mit erheblichen Exportüberschüssen. Die aktuelle Krise verringert diese Ungleichgewichte allerdings, weil in Ländern mit deutlichen Handelsbilanzdefiziten die Importe erkennbar zurückgehen. Im selben Umfang verringern sich die Exporte der Länder mit Handelsbilanzüberschüssen.

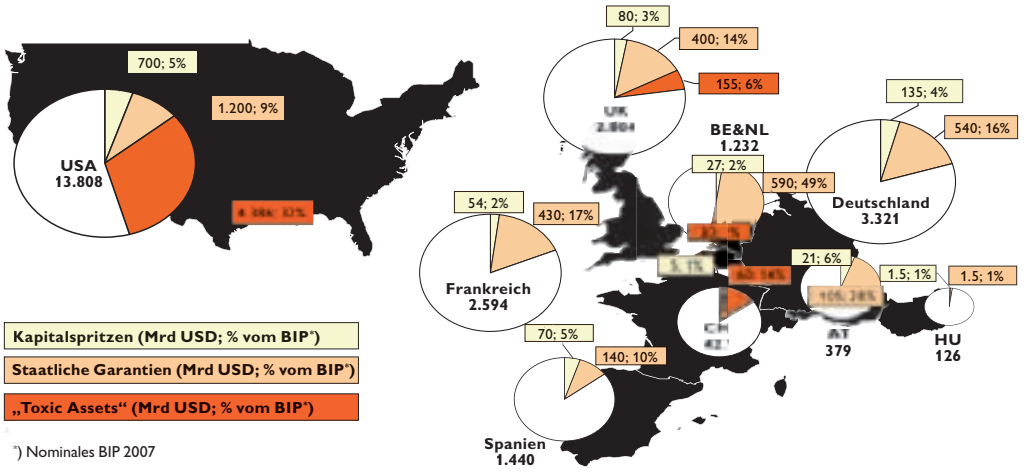
[11] *Die entsprechende EU-Richtlinie (2009/14) sieht vor, dass das EU-weite Minimum ab 31. Dezember 2010 100.000 EUR betragen soll.*

[12] *Die einzige Ausnahme bildet Ungarn.*

Grafik 1

Bankenpakete in ausgewählten Staaten Europas und in den USA

in Mrd USD

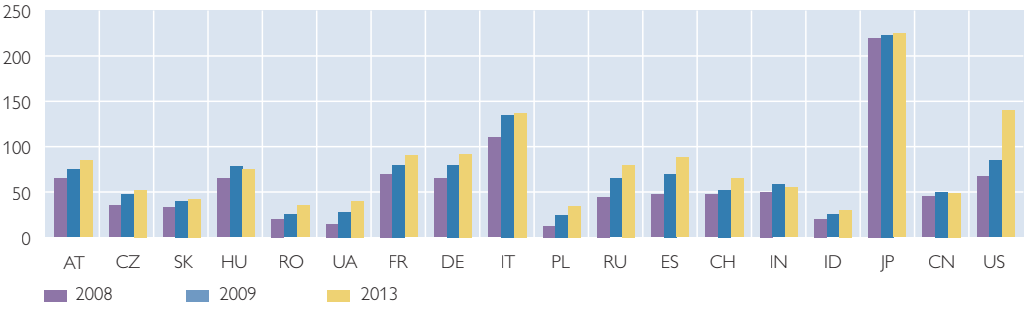


Quelle: Reuters, Bloomberg, New York Times, IWF, Erste Group Research.

Grafik 2

Erwarteter Anstieg der Gesamtverschuldung ausgewählter Staaten von 2008 bis 2013

in % des BIP



Quelle: EIU, Erste Group Research.

Tabelle 1

Neuemissionen von Partizipations- und Hybridkapital im Rahmen des österreichischen Bankenpakets

	Neuemission von Partizipations-/Hybrid-kapital insgesamt	Davon mit privater Platzierung von 30% oder mehr
	in Mrd EUR	
Bereits durchgeführt (Stand Juni 2009)		
Erste Group Bank AG	2,7	Ja
Hypo Alpe-Adria-Bank AG	0,9	Nein
Raiffeisen Zentralbank	1,75	Ja
Volksbanken-Gruppe	1	Nein
Angekündigt (Stand Juni 2009)		
Bank Austria	2,7	
Hypo Tirol Bank AG	0,1	
Wüstenrot	0,15	

Quelle: Bundesministerium für Finanzen.

Podiumsdiskussion III:
Österreichs Ostschwerpunkt: Auslöser von Instabilität und asymmetrischen Schocks?

Panel III:
Austria's Focus on Eastern Europe: A Source for Fragility and Asymmetric Shocks?

Bernhard Felderer
Director
Institute for Advanced Studies

Austria's Focus on Eastern Europe: A Source for Fragility and Asymmetric Shocks?

This presentation argues that most Eastern European countries have a sound economic basis and that shocks coming from Western Europe could hurt the Austrian economy much more than shocks coming from the "new" Member States.

This short paper follows the sequence of the charts as presented at the session on May 15, 2009 (see below). Eastern Europe has shown an impressive economic performance over the last years. Slovenia has a per capita GDP of more than 80% of the average of EU-15. The Czech Republic has also been very successful, with a per capita GDP already higher than two thirds of the EU-15 average and surpassing the per capita GDP of Portugal. Even the youngest EU members, Romania and Bulgaria, have shown an impressive record of per capita GDP in the last years.

All over Europe industrial production, in particular exported investment goods, decreased by very high rates in 2008/2009. In Hungary, for example the industrial production declined by 26% between February 2009 and February 2008. However, looking at the charts, we see that also Western nations are confronted with a similar problem: the reduction of the industrial production in the same period in Germany and Italy was 22%. It seems that countries which have high export ratios and high ratios of investment goods in their exports have been hit more severely than countries with smaller export/GDP ratios and smaller shares of investment goods in their exports. Poland and Denmark have done relatively well during the crisis so far.

Given the decline in industrial production, the negative growth rates of many Eastern European countries seem relatively modest compared to Western Europe. One striking fact is that the decline in GDP shows a very heterogeneous picture of Eastern Europe. While the Baltic States, Latvia, Lithuania, Estonia, have very high negative growth rates of more than 10%, countries like Poland and Bulgaria are doing much better. In the 2009 spring forecast of the European Commission the decline of the GDP of Poland in 2009 is estimated at not more than 1.4%. The Ukraine also has a very high negative growth rate, similar to the Baltic States, but the data are not very reliable. According to the 2009 spring forecast of the European Commission, growth in the new Member States in 2009 will on average not be lower than minus 2.5%, whereas the decline in the EU-15 will be minus 4%.

Another argument which shows that the dependence of Austria on Western Europe is much higher than on Eastern Europe is the structure of Austrian exports according to export destination. Nearly 30% of all Austrian exports go to Germany. Germany is followed by Italy with 8.6%, and Switzerland and France with each a share of 3.8%. The relevant Eastern European nations have smaller shares, as illustrated in the charts. The total share of all export to Eastern Europe is 23.3%, while the total share of exports going to the euro area is 50.4%. These figures constitute a strong argument for the assertion that economic problems in Western Europe affect the Austrian economy much stronger than similar problems in the East. Until recently growth in the East was higher than in Western countries and also declines less sharply at present. Moreover, Austria's share of exports to these countries has been small and therefore the

likelihood that the Austrian economy will be affected by a shock from the East is much smaller.

Some people have argued that these facts may be true for the real economy and exports of real goods, but that the problems rather lie in the exposure of Austrian banks in Eastern European Countries, in the Austrian foreign direct investment stocks in those countries, in the indebtedness of households and companies in Eastern European countries, and in the devaluation of the national currencies in Eastern Europe. We proceed by discussing each of these issues one after the other:

The Austrian FDI stock is relatively evenly distributed over many countries in the world. Germany again has the largest share with more than 13.8% of the FDI stock, but as the chart 6 shows, the Austrian FDI stock is not concentrated in certain areas. Central and Eastern European Countries take a to-

tal share of 45.8%, and the EU-15 a total share of 34.8%. Problems that might emerge from decreasing prices of real estate (e.g. business centers, hotels, etc.) in a particular country, or even in a group of countries, would be compensated for by positive developments in other parts of the world.

The exposure of Austrian banks in Eastern Europe seems to be large. But there are several reasons why we do not expect a catastrophe for one of the three major banks active in this area: Raiffeisen International, Erste Bank and Bank Austria. First, exposure of Austrian banks is dispersed over 20 post-communist countries. The largest share, allocated to the Czech Republic, is about 20%. The second-largest, with only 15%, is allocated to Romania. Some of these countries, like Poland, which has a share of about 6%, are – as mentioned above – doing particularly well in the crisis. Second, exposure in countries where the crisis has up to now been particularly severe, i.e. the Ukraine and the Baltic States, the allocation of resources is quite small. Raiffeisen International has bought the second-largest bank in the Ukraine, AVAL Bank. The exposure of this bank is approximately EUR 5 billion. If we would assume an extremely high loss of 20% of total exposure in this country, it would still not be much higher than the net profit of this company in 2008, which was close to EUR 1 billion. All three banks have made a lot of money in recent years in Eastern Europe. They will therefore be able to cover a large part of the expected losses out of their own profits. Beyond that, all three of them have reserves in the total of the corporation to which they belong. Moreover, the Austrian government has committed to help with government funds.

One of the most erroneous arguments has been that Eastern European households and companies are highly indebted. The contrary is true. Loans to households and companies with respect to GDP are in all countries of Eastern Europe smaller than in the

average of the euro area or in Austria (chart 8). The gross debt of governments in Eastern Europe is, again with the exception of Hungary, smaller than indebtedness in Western Europe. None of the East European countries (with the exception of Hungary) will reach the debt limit of 60% of the GDP in 2009, while nearly all western European countries are above this notorious strategic figure. The Czech Republic, e.g., will have about 34%, Slovakia close to 32%, and Poland 54%. Representative examples for the West are France with close to 80%, Germany over 70%, Greece over 100%, and Italy more than 110%. Exceptions in the West are Denmark with 33%, Sweden with 44%, and Spain with about 50%.

One of the great dangers for Eastern European countries has been capital flight. Since summer 2008 more or less all Eastern European currencies (chart 10) have depreciated with respect to the euro. After the intervention of the IMF in spring 2009, a slight revaluation has started and stabilized the currencies of the whole area.

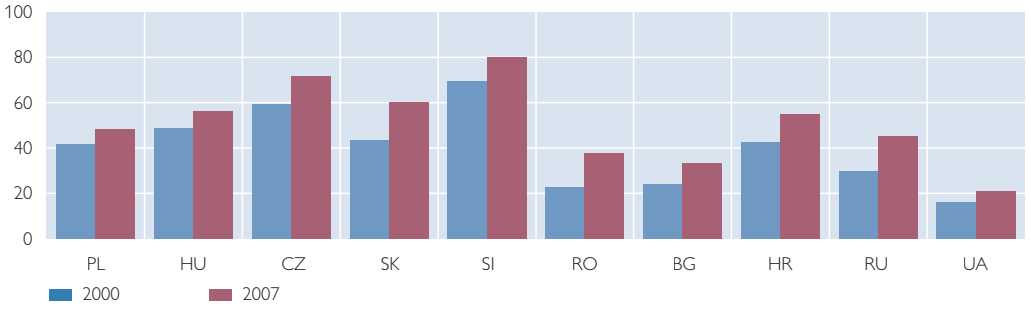
In summary we can conclude that the trading partners of Austria in the East and the exposure of Austrian banks in the East are in much better shape than claimed by many uninformed sources. Many countries of Eastern Europe have a good chance to survive the crisis better than Western Europe, and shocks coming from this area constitute a much lesser threat for Austria than shocks coming from the West. The three large Austrian banks engaged in Eastern Europe will have to endure unusually large losses in the East, but Austria is far from a systemic risk and an existential problem for the country.

Appendix

Chart 1

Catching-up Process of GDP per Capita in the CESEE and CIS Countries

% of the EU-15 average

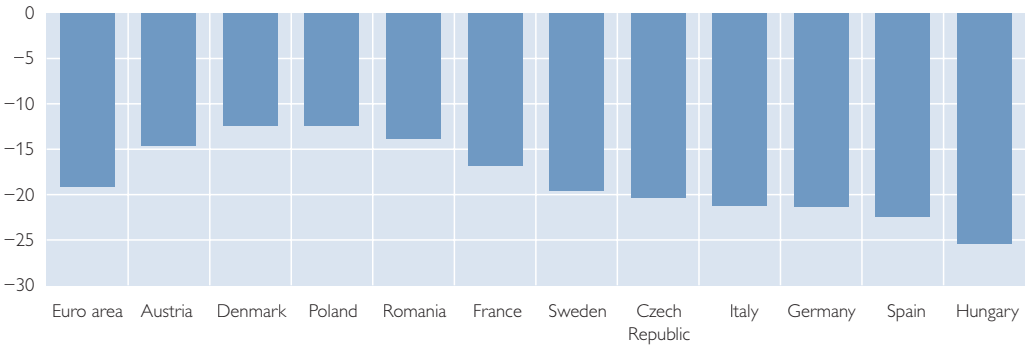


Source: Eurostat, Raiffeisen.

Chart 2

Industrial Production – Rates of Change to Same Month of Previous Year (February 2009)

annual change in %

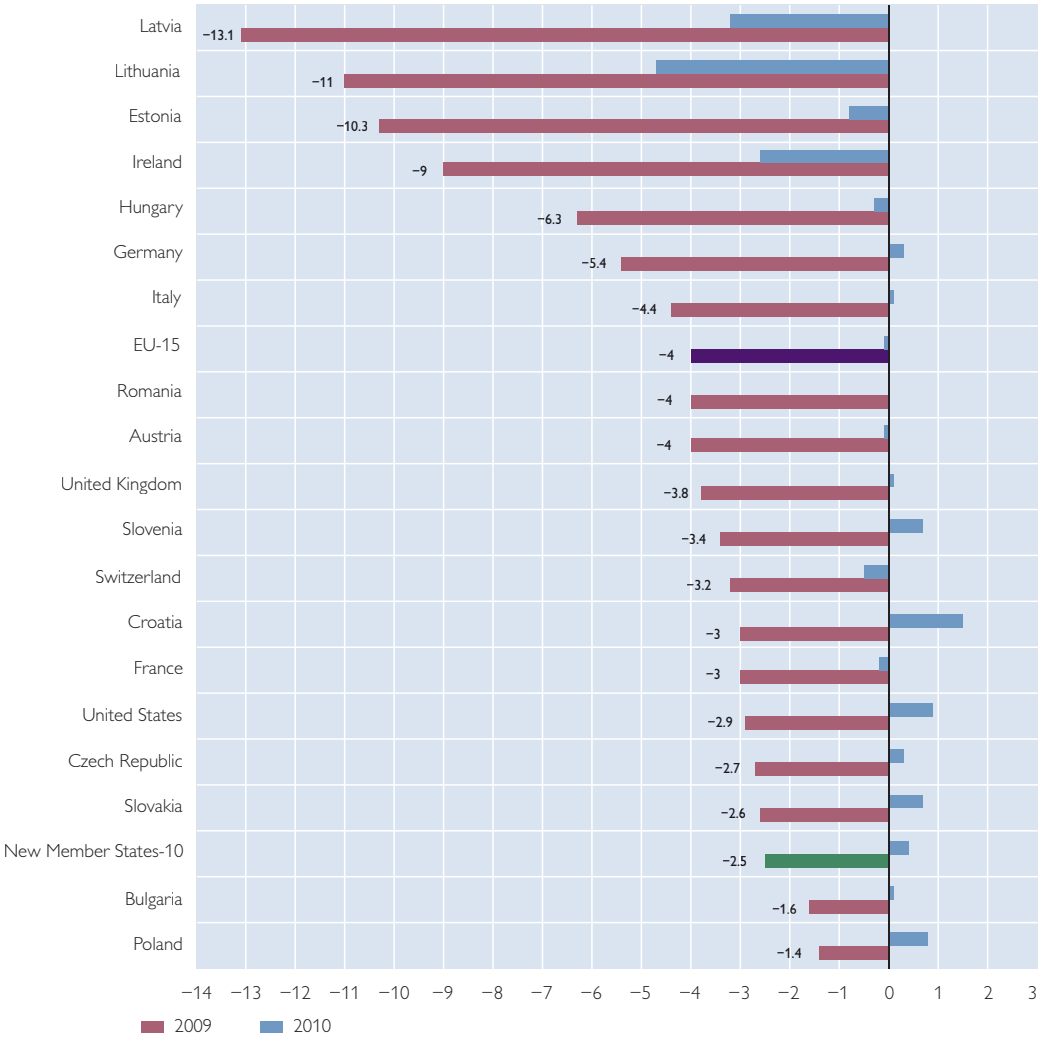


Source: Eurostat.

Chart 3

General Government: Consilidated Gross Debt

%

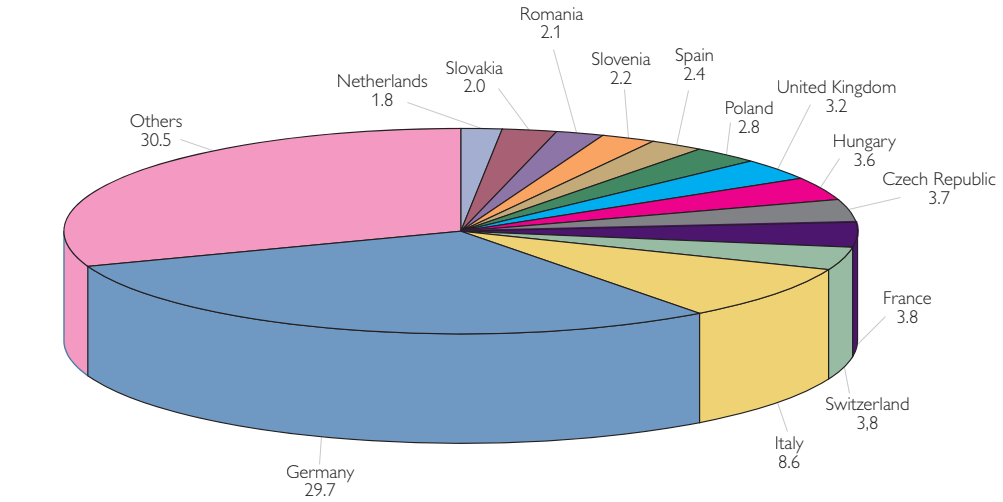


Source: European Commission, Spring Forecast.

Chart 4

Export Structure Austria – According to Export Destination

%

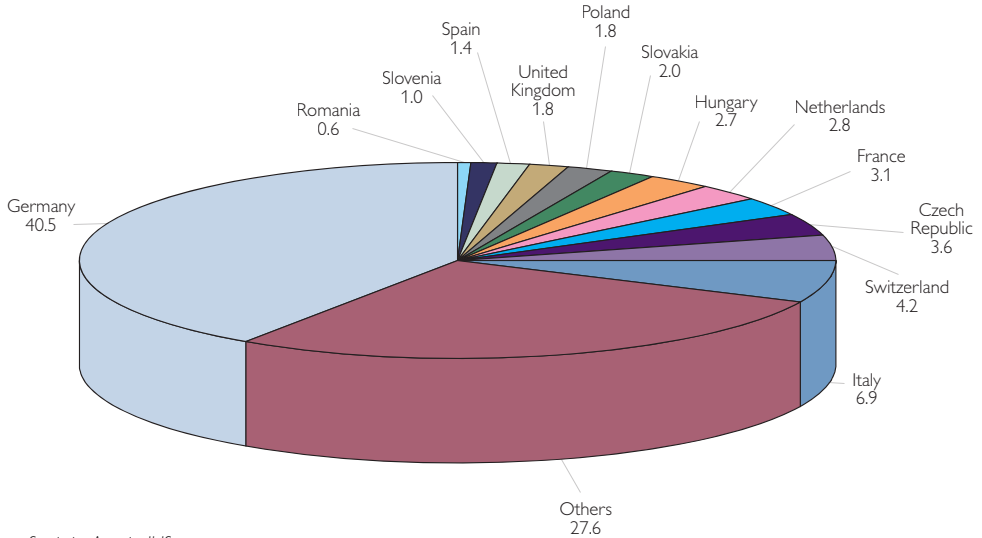


Source: Statistics Austria, IHS.

Chart 5

Import Structure Austria – According to Import Source

%

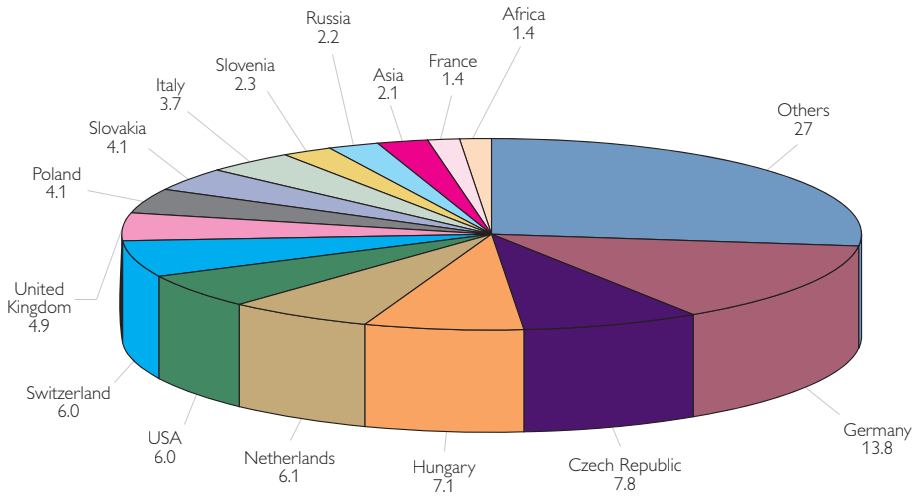


Source: Statistics Austria, IHS.

Chart 6

Austrian FDI Stock in 2006

%

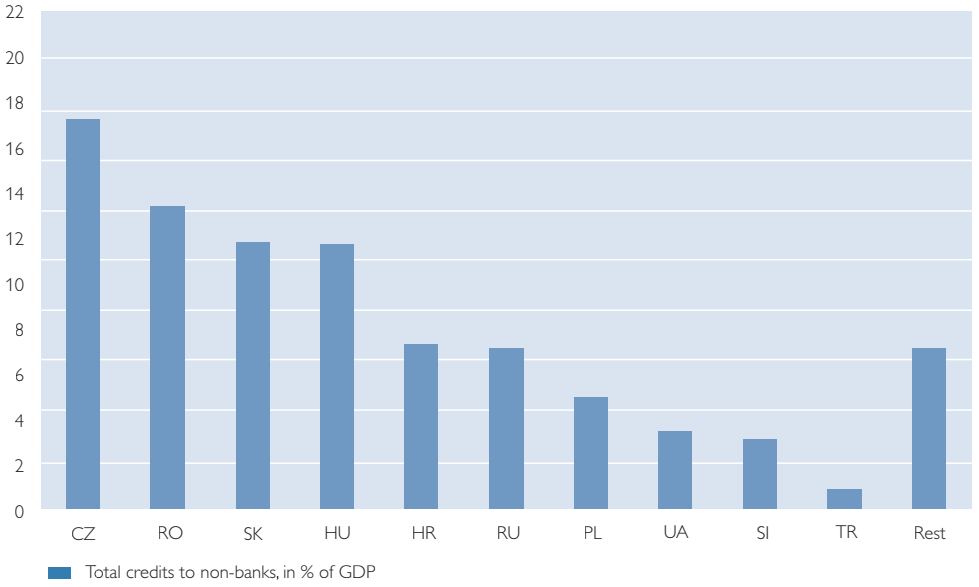


Source: OeNB, IHS.

Chart 7

Allocation of Exposure of Austrian Banks in CEE Countries

% of total Austrian exposure

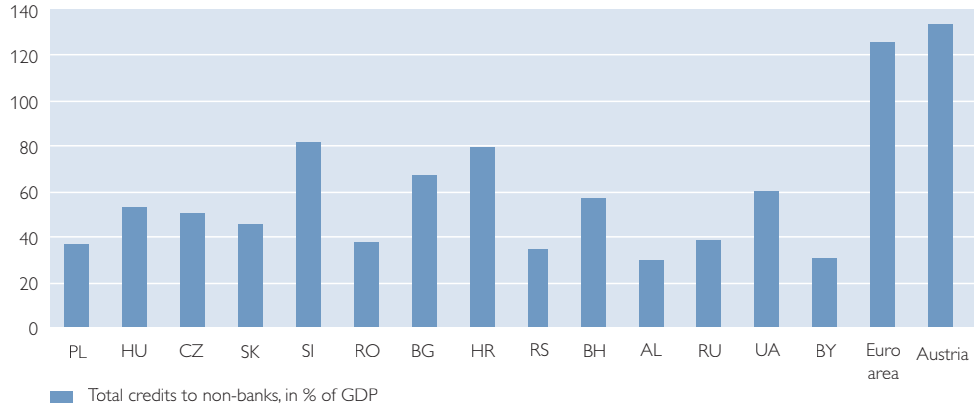


Source: OeNB (2008/3).

Chart 8

Loans to Households and Companies in 2007

in % of GDP

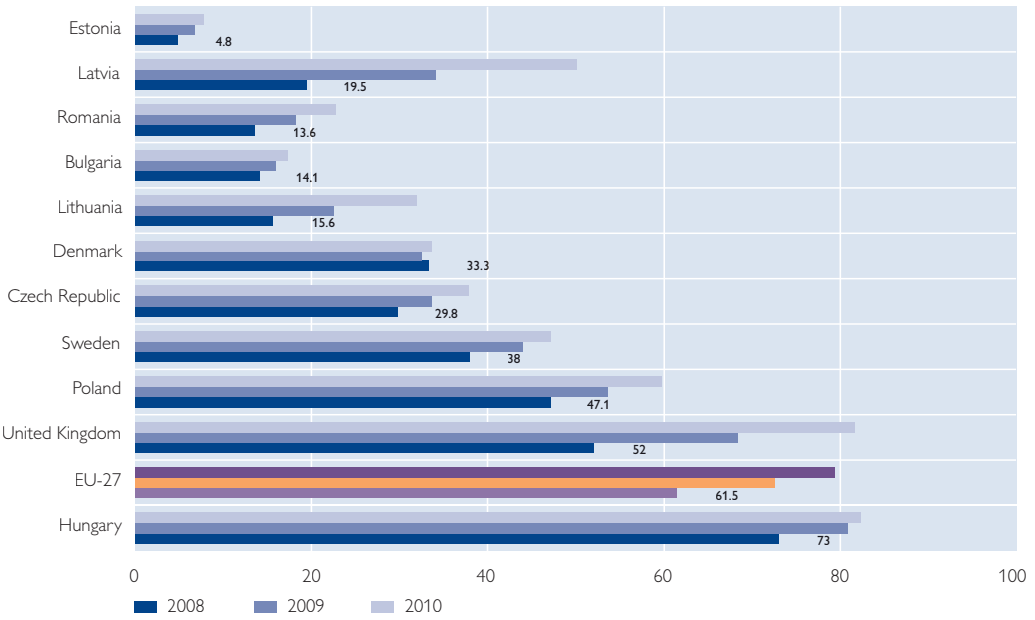


Source: OeNB.

Chart 9a

General Government: Consilidated Gross Debt

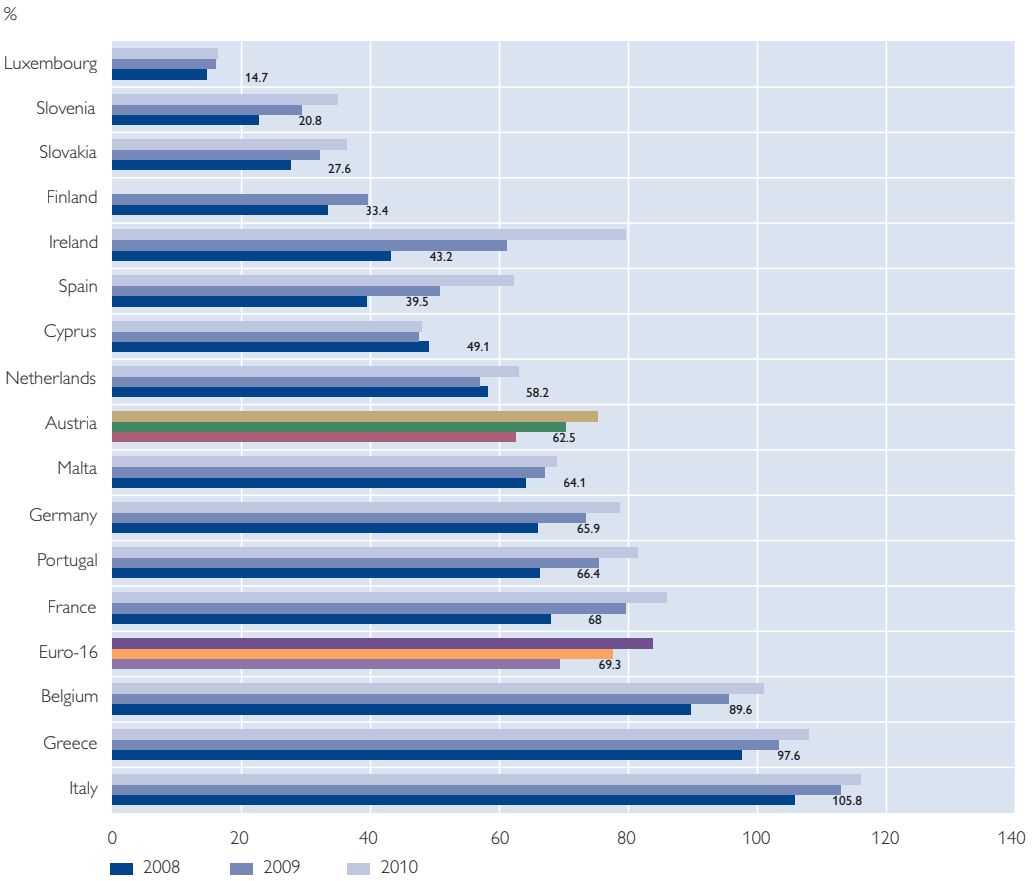
%



Source: European Commission, Spring Forecast.

Chart 9b

General Government: Consilidated Gross Debt



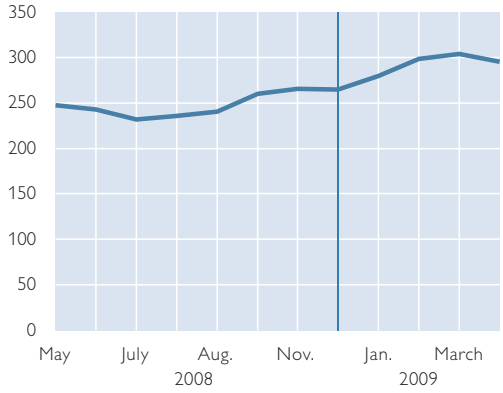
Source: European Commission, Spring Forecast.

Chart 10

National Currencies' Euro Exchange Rates

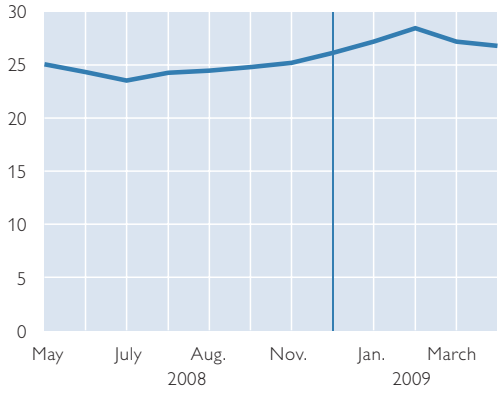
Hungarian forint

monthly average



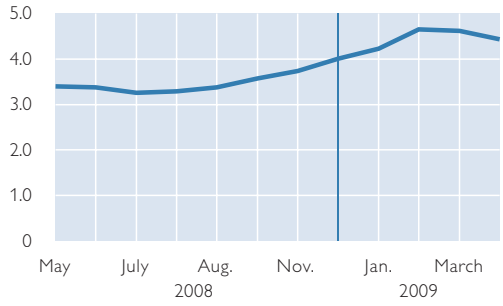
Czech koruna

monthly average



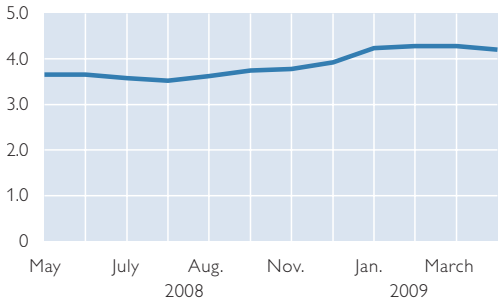
Polish zloty

monthly average



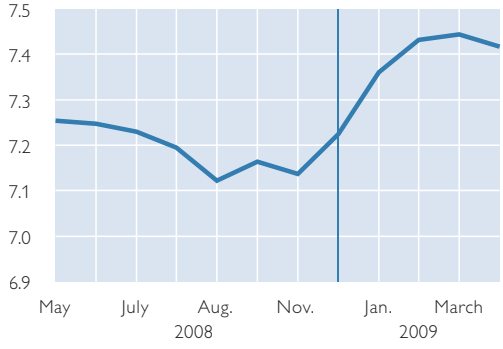
Romanian leu

monthly average



Croatian kuna

monthly average



Source: Eurostat, IHS.

Walter Rothensteiner
CEO
Raiffeisen Zentralbank Österreich AG

CEE – Austrian Banks Look beyond the Crisis

The Austrian economy has developed very successfully over the past few decades. Austria has grown to one of the most competitive economies worldwide, with a strong focus on exports, combining cooperation between the industrial sector and the banking sector. This has been the key for success. But aside from the strength of Austrian companies and economy being part of this story, a lot more can be attributed: Austria's engagement in Central- and Eastern Europe (CEE) has been the backbone of its prosperity. We have been pioneers and first-movers in the region, helping to develop the economies following communism. Helping develop those economies has been the engine for our success in the past and made us strong and experienced to overcome the current crisis. Our goal is to come out of the crisis stronger, in an ideal competitive position in our home markets, Austria and CEE.

Reading international newspapers today, one can easily get the impression that the Austrian economy and particularly the Austrian banking industry are overextended. Is this true that our engagement in CEE has been a mistake, like international experts tell us? Was it wrong to concentrate on Central and Eastern Europe? Here there is a clear answer: No, it was by no means the wrong decision!

The Financial Crisis – a Global Crisis

First of all, the current financial and economic crisis is a global crisis. It is not a crisis purely focused on Central and Eastern Europe or on any other single region. The banking industry throughout the world has been harmed by this crisis and it is in no way only limited to banks engaged in these particular emerging markets.

I am convinced that Austria's involvement in CEE was a question of taking advantage of an opportunity of historic dimensions. Austrian banks were pioneers in this region. We have helped to establish a modern banking industry. Taking into account the proximity, a common history and culture, it was in our very own economic and political interests to support these particular countries during this important transition process.

Back in the year 1989, when the *iron curtain* fell, Austria was a successful economy. But our industry was very dependent on the German industrial sector. More than one third of Austrian exports went to Germany, as compared with only 5% to Central and Eastern Europe.

CEE as Stimulating Factor

The Austrian industry accepted the chance to enter a new market of more than 300 million consumers. Over the past 20 years Austrian enterprises have directly invested more than EUR 50 billion in Central and Eastern Europe. This makes Austria number three regarding FDIs in this region after, Germany and the Netherlands. In 2008, 23% of Austrian exports were directed to this region.

All this came in line with fundamental changes in the Austrian industry. Labour-intensive production was relocated, competitiveness increased and production enlarged. A clear win-win situation for all parties evolved. Many Austrian companies became international players and in Austria alone some 500,000 additional jobs were created over this period. GDP per annum grew significantly more than in the previous years.

To put it all into a nutshell: for more than 20 years Central and Eastern Europe has, by no means, been a source

for fragility or asymmetric shocks, but rather a source for economic growth and prosperity for many countries; not just for Austria but also for the other European partners and even beyond.

The Crisis as a Challenge

The current crisis is the most serious challenge faced by the CEE countries since the transition process began in 1989. As previously mentioned, the current crisis did not originate in the CEE region and is not limited to any country, sub-region or industry.

Although the negative impact of the current crisis for the CEE states is unquestionably strong, one should not lose sight of the fact that this is a truly global crisis that impacts all economies, both for developed and emerging markets.

So what is the impact for Austria and its banking industry? Austria's exposure to Central and Eastern Europe is approximately EUR 200 billion. More than 70% of this is located in EU Member States. Furthermore, more than 80% of all loans are covered by local deposits throughout the region. This simple analysis makes the investment safer and clearly reduces the risk for Austria in total.

The current crisis has impacted the region while the CEE region's convergence process is still in a comparatively early stage: I think it is safe to say that in our industry, the region as a whole has only around one-third of that process behind it to date.

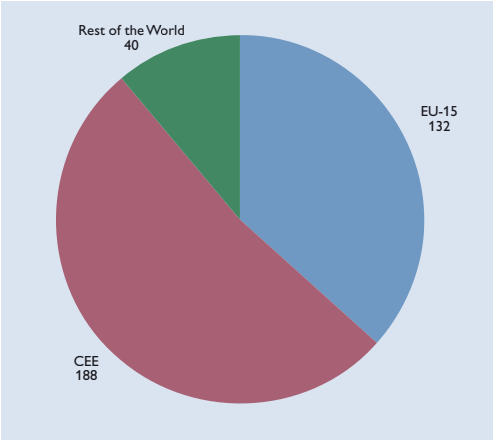
Also, for this reason we highly welcome international financial institutions and governments preparedness to provide relevant states in the CEE region with support when, where and how the individual states require it. At this point one should particularly mention the important actions taken by the International Monetary Fund. It has been a quick, strong and far-sighted support for CEE. This engagement is also working in close accord with the banking sector and the leading international financial institutions such as the European Investment Bank, the EBRD and the World Bank. This is exactly the help that is needed.

To ask, if the Austrian Focus on Eastern Europe has been a source for

Chart 1a

Total Austrian Exposure

EUR billion

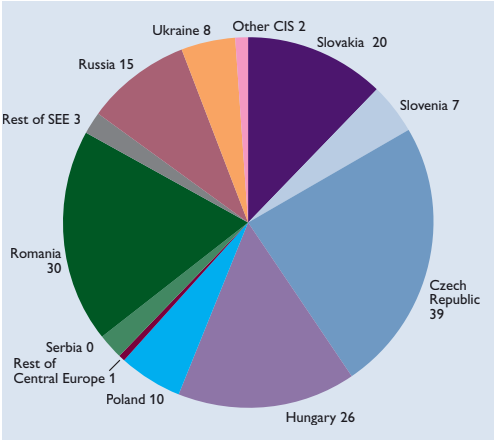


Source: BIS, Raiffeisen Research.

Chart 1b

Austrian Bank Claims in CEE

EUR billion



Source: BIS, Raiffeisen Research.

fragility or asymmetric shocks today is not legitimate. The crisis did not emerge in those countries and is not restricted to those countries.

High Potential for the Future

The facts are clear: If the Austrian economy does not want to reduce its scope and focus only on its domestic markets then there can be no alternative for the Austrian economy other than to pursue the opportunities offered by CEE's continuing transformation process. Central and Eastern Europe is an important and strategic market close to us with 300 million potential customers. This region remains a highly interesting and convincing market for banks: in the new Central European Member States of the European Union, 20% of adults still do not have their own bank account. In Romania and Ukraine, this figure reaches 50%. This just demonstrates the growth potential for the banking industry.

A further indicator for future growth potential is average income. In Austria the average monthly gross wage stands at EUR 2,868 (according to wiiw *Current Analysis and Forcast*; July 2009). In the new Central European Member States of the European Union, the average wage is EUR 900, in Southeastern Europe it is EUR 500 and in Russia EUR 470. Once the crisis is overcome, the inhabitants of this region will continue their efforts to reduce this gap. This bias will be further boosted in 2011, when states in Western Europe will open their own labour markets for the new Member States.

The *convergence story* has not come to an end. CEE remains interesting for the financial industry, for Austria and for Europe as a whole. The region still promises higher productivity growth than Western Europe, boosted by high education standards and competitive tax systems. Favourable real exchange rates due to weak currencies offer opportunities for exporters.

The banking sector, compared to the EU average is underdeveloped. The CEE region will regain its role as Europe's *engine for growth* as the current crisis recedes over the next two to three years.

CEE – Growth Engine for Europe

Looking to the future, the CEE growth engine is unlikely to outperform the advanced economies in Western Europe in the same proportions as it did in the past. However, that development is welcome, as it makes overheating less likely. The future growth differential is likely to be around 2 to 3 percentage points – compared to 3.5 to 4.5 percentage points in the past.

Finally: Could the Austrian Focus on Eastern Europe be a source for fragility or asymmetric shocks for the future? The answer remains clear: No, the opposite is true. Austria's focus on CEE is a source for growth and continues to provide promise for ongoing significant potential.

Chart 2

Current Economic Situation

Source: Raiffeisen Research, Thomson Reuters.

Yes, it was right to take advantage of this unique opportunity. It was the right decision to invest in these markets, and we remain committed to continuing this journey. Austrian banks, and the Austrian economy as a whole made the most of this opportunity and have benefitted. Working together with these important CEE markets, the future of Austria will see us return to the path of growth.

Silvia Sgherri
Senior Economist
International Monetary Fund

Financial Linkages Across European Borders: Dangerous Liaisons or an Unmissable Opportunity?

Good morning. I am delighted to be here today, to talk about cross-border financial linkages as a key channel of transmission of shocks and as an unmissable opportunity for policy coordination, particularly within Europe.

Financial systems in advanced and emerging European economies have undergone remarkable changes over the past decade. Western European banks, for example, have dominated bank lending flows to emerging economies since the mid-1990s. By end-2007, their assets in emerging economies reached 10% of advanced-economy GDP, compared to a combined 2.5% of GDP for Canadian, Japanese, and U.S. banks. Emerging Europe, in turn, stands out as the main recipient of bank lending flows. Foreign claims in terms of destination GDP are the highest among emerging regions.[1]

As cross-border ownership of assets has increased, it has revealed not only important benefits associated with financial integration, but also new risks.[2]

Surely, greater financial integration has shown its ability to disperse claims to a broader range of portfolios, so that risks are better spread. In particular, financial integration holds great potential to smooth incomes through cross-border asset diversification, and thus stabilize the economy in the face of asymmetric shocks. Empirical work on the United States estimates that two-fifths of the income effect from local shocks is smoothed away through asset holdings across state lines. A similar analysis for European countries shows that, since 1999, risk sharing has begun to emerge also across these economies, although the extent to which financial integration is able to insure incomes against country-specific shocks is still limited and uneven across regions – with estimates below 10% in all regions.[3]

Adjusting well to shocks means having a system that is not only resilient but also reallocates resources more efficiently across sectors and across firms, thereby fostering growth. Also, improved, risk-adjusted growth opportunities appear to be related to future advances in integration. This empirical regularity indicates that the countries whose integration has been faster benefit most from a virtuous dynamics in which financial integration and improved real prospects are mutually reinforcing. And Europe is found to be the region that has benefited the most from such dynamics.[4]

At the same time, though, financial integration poses new challenges to market investors and policymakers. Cross-border ownership of assets exposes financial institutions such as banks to macroeconomic, financial, and asset price fluctuations in the countries where they hold positions. Increasingly complex linkages across market segments and borders make the transmission of shocks in the international economy and the pattern of risk

[1] *Arvai, Driessen and Ötker-Robe (2009); Maechler and Ong (2009); and Balakrishnan, Danninger, Elekdag and Tytell (2009).*

[2] *Sgherri (2008).*

[3] *Kalemli-Ozcan, Sørensen and Yosha (2003).*

[4] *De Nicolò and Ivaschenko (2008).*

dispersion more opaque, creating uncertainty for agents and policymakers about where the ultimate risks lie.

Right now, within Europe, the unfavorable feedback loop across borders appears to be in full swing.[5]

The current financial turmoil originating in the United States was propagated through direct exposure to toxic assets and a reassessment of the viability of existing banking models. Wholesale liquidity evaporated, complex assets proved to be difficult to value, lack of transparency about counterparty risk undermined trust, and markets took a dim view of leverage. Hence, many banks came under severe pressure and several had to be bailed out or resolved, a process that is still ongoing.

Model-based analysis suggests that the initial financial shock was transmitted to the real economy, primarily through the asset price channel and in a more differentiated fashion through the credit channel. In addition to confidence and wealth effects adversely affecting demand, the fall in equity prices – which often amounted to more than 50% – raised the cost of capital and dampened investment. Such a shock is estimated to have had its strongest impact on the advanced economies of Europe, but the Baltic economies would seem similarly sensitive. Central European economies appear more moderately susceptible, while Southeastern Europe is more insulated.[6] These model findings are consistent with the view that banks operating in emerging Europe, which relied more on traditional business models, were initially not affected by direct exposure to toxic assets.

However, the flight to safety associated with the intensification of the financial crisis in late 2008 rapidly put paid to the notion that emerging economies would decouple in a meaningful way. Indeed, one of the key features of the ongoing financial crisis is a severe repricing of risk at a global level, with important crisis events ratcheting up risk aversion.[7] The ensuing international portfolio reallocation led to a decline in the relative price of domestic assets in emerging economies. The pressure to reduce leverage in parent banks in advanced countries and higher perceived risks drove up credit yields and led to a reduction in inflows to most emerging economies, resulting in a collapse in their credit growth, albeit from high levels.

Evidence from past episodes of systemic banking stress in advanced economies (the Latin American debt crisis of the early 1980s and the Japanese banking crisis of the 1990s) shows that the decline in capital flows tends to be sizeable and long lasting. Since then, banking globalization has continued and risks of large scale de-leveraging associated with common lender effects have risen. Given the large share of external financing through banks, a number of emerging European economies is likely to suffer substantially from a drought of capital inflows.[8]

As a consequence, all of Europe now sits in one boat facing the same rough weather – and emerging and advanced economies will have to jointly coordinate a course out of it.[9]

[5] *Everaert (2009).*

[6] *Galesi and Sgherri (2009).*

[7] *Lombardi and Sgherri (2009).*

[8] *Balakrishnan, Danninger, Elekdag and Tytell (2009).*

[9] *Čihák and Mitra (2009).*

Governments and central banks have indeed taken unprecedented actions to address this crisis, which have helped to prevent an outright meltdown of the financial sector and even more serious consequences for GDP growth and employment. At the same time, though, the crisis has revealed a lack of coordination that may have contributed to the crisis itself and that is now threatening the effectiveness of the European policy response for a speedy recovery.

The coordination gap is most obvious in the financial sector where – prior to the crisis – national regulators as a group missed the opportunity to reign – in regional financial institutions. One problem was insufficient information sharing between home and host supervisors of cross-border entities, which left some problems undetected. Another was the need for macro-prudential regulation (concerning, for instance, capital requirements and countercyclical loss provisions), which might have been obvious from an aggregate European but not always from a national one. These problems, which have yet to be fully resolved, illustrate the simple truth that allowing regulatory and supervisory coordination to lag behind financial market integration is never a good idea.

Inevitably, the lack of coordination also hampered – and continues to trouble – the crisis resolution effort. The ECB has boldly stepped up and provided liquidity for the euro area and some selected European countries. It has little or no say, however, on the crisis clean-up. Here the to-do-list remains long, including the urgent need for full loss recognition, consistent stress testing to evaluate prospective losses, recapitalizing viable institutions while resolving others, and ring-fencing of impaired or difficult-to-value assets. But despite an intensifying discussion of an European approach, the bulk of this agenda still rests squarely with national authorities. This could prove self-defeating. Without an organized and region-wide approach to calibrate the parameters of these interventions, they could easily open up the door to unwanted policy arbitrage. Such a development would severely limit the effectiveness of the European crisis effort and create political trouble spots at the wrong time. On a similar vein, there is an urgent need to move ahead (and quickly) with the establishment of a European financial stability framework to coordinate crisis management across the region. Once again, creating a robust burden-sharing scheme for cross-border institutions will require a larger role for European institutions, in particular the EU.[10]

Another area of coordination are monetary and exchange rate issues. For instance, the ECB has been fairly selective in its currency support to non-euro area countries, although the benefits of currency swap agreements and a clarification of the euro roadmap for new EU Member States appear to be substantial. Given the strong feedback

[10] *Čihák and Fonteyne (2009).*

loops between emerging Europe and the euro area, filling the coordination gap in all of these areas will help to avoid unwanted volatility in currency and financial markets.

Let me, hence, conclude my intervention by arguing that, if there is a lasting lesson from the crisis for Europe, it is that a tightly integrated region requires a regional perspective from policy makers. Undeniably, the economic and financial integration of Europe's economies has been a tremendous success story in recent years, and the current storm provides an opportunity to strengthen and weather-proof some of its institutions – an opportunity that should not be missed. In other words, to plot the course out of the current storm, we will need more Europe not less.

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Podiumsdiskussion IV:
Wirtschaftliche Folgen der Weltwirtschaftskrise für Österreichs Unternehmen und Arbeitnehmer: Was kann die Wirtschaftspolitik tun?

Panel IV:
Economic Consequences of the „Great Crisis“ for Austrian Businesses and Employees: How Can Economic Policy Help?

Markus Beyrer

Generalsekretär der Industriellenvereinigung

Wachstum und Wohlstand nur mit einer starken Industrie

Über die Ursachen der aktuellen globalen Finanz- und Wirtschaftskrise wird noch viel diskutiert werden. Ökonomen und Experten sind sich diesbezüglich keineswegs einig. Eine genaue Analyse der Entstehung dieser Krise ist aber mit Blick auf die sicherlich notwendige Neuordnung der internationalen Finanzmärkte dringend notwendig. In diesem Zusammenhang ist es als absolut positiv zu bewerten, dass der internationale Konsens, der Wille zur Zusammenarbeit wohl noch nie so groß war wie heute. Dies ist gerade aufgrund der Lehren aus der Vergangenheit erfreulich – nämlich dass es gelingen wird, diese Krise in internationaler Kooperation erfolgreich zu bekämpfen.

Eine der wichtigsten Lehren aus der großen Weltwirtschaftskrise der Vergangenheit, welche 1929 ihren Ausgang nahm, ist die Erkenntnis, dass gerade in einer solchen internationalen Krise Protektionismus keine positiven, sondern im Gegenteil geradezu katastrophale Auswirkungen hat. Protektionistische Tendenzen traten auch diesmal in Erscheinung, so etwa in Zusammenhang mit den Konjunkturpaketen Frankreichs und der USA, doch bisher konnte erfolgreich verhindert werden, dass sich die „Fratze des Protektionismus" auf breiter Ebene erheben kann. Gerade für uns in Europa, die wir so stark von den beiden Stabilitätsankern Euro und Binnenmarkt profitieren, ist dies von besonderer Bedeutung. Wenn aus der derzeitigen Rezession keine Depression werden soll, müssen wir aus den Erfahrungen der 1930er-Jahre lernen und der *Beggar-thy-Neighbour-Politik* eine klare Absage erteilen.

Genauso wie international ein Miteinander sehr viel erfolgversprechender ist als ein Gegeneinander, so muss aber auch auf der nationalen Ebene Trennendes in der jetzigen Zeit überwunden werden. Arbeitnehmer und Arbeitgeber können diese Herausforderung nur mit einer gemeinsamen Anstrengung überstehen, und auf keinen Fall darf aufgrund alter ideologischer Reflexe der Markt gegen den Staat ausgespielt werden. Wir brauchen jetzt sowohl die stabilisierenden Kräfte des Staats, als auch die dynamischen des Markts. Genauso wichtig ist es, die Zeit des Schuldzuweisens zu überwinden, und sich mit klarem Blick den Ursachen der Krise zuzuwenden. Krisen wird es immer geben – umso wichtiger ist es, aus der aktuellen die richtigen Schlüsse zu ziehen.

Mit fremden Geld ist leicht wirtschaften

Die Finanzmarktkrise hat uns zum Beispiel gezeigt, dass das *Originate and Distribute*-Geschäftsmodell der Investmentbanken, also die weltweite verbriefte Weitergabe von Eigenrisiko und der geringe Eigenkapitalanteil dazu verleiten, unangemessenes Risiko einzugehen. Die Leverage-Ratio von Lehman Brothers (Verhältnis von Eigenkapital zu Bilanzaktiva) betrug zum Beispiel Anfang 2008 den Wert 31,7. Das entspricht einer Eigenkapitalquote von 3,17 %.

Ohne Industrie kein Wachstum

Die Konjunkturkrise zeigt uns auch noch deutlicher als vorher, dass Wachstum und Wohlstand in Österreich ohne die industrielle Basis undenkbar sind. Vor allem die großen Unternehmen, die am meisten exponierten Leitbetriebe des Standortes, sind die größten Multiplikatoren für Wachstum und Beschäftigung im Land. Das wird dann besonders sichtbar, wenn ihre Zugkraft konjunkturbedingt nachlässt. Die glo-

bale Industrieproduktion wird laut IWF bis Mitte des Jahres um 15 % unter dem Wert des Vorjahres liegen. Im Euroraum ist sie laut Eurostat im Februar um 18 % gefallen und auch in Österreich wird der Rückgang auf Jahresbasis nicht unter 10 % liegen (Daten vom Februar: –14,2 % gegenüber 2008).

Wir haben errechnet, dass ein Produktionsrückgang von 10 % bei 103 ausgewählten heimischen Leitbetrieben – den ich noch nicht sehe – verheerende Folgen für den Standort Österreich hat: Ein 10-prozentiger Produktionsausfall führt direkt und indirekt zum österreichweiten Entfall von jährlich 8,8 Mrd EUR an Produktion, 3,5 Mrd EUR an Wertschöpfung, 3,6 Mrd EUR an Exporten, 820 Mio EUR an Investitionen und 940 Mio EUR an FDIs. Diese Zahlen mögen vielleicht etwas theoretisch wirken, aber man kann deren Auswirkung auch anders ausdrücken: Dieser Einbruch birgt das Risiko eines Verlusts von (jährlich) 46.000 Arbeitsplätzen – davon 1.100 allein im hochqualifizierten Forschungsbereich, 1,4 Mrd EUR an Arbeitnehmerentgelten, 740 Mio EUR an arbeitnehmerinduzierten Abgaben, 220 Mio EUR an F&E-Ausgaben und 30 Mio EUR für Aus- und Weiterbildung der Mitarbeiterinnen und Mitarbeiter.

Neue Rahmenbedingungen für die Wirtschaftspolitik

Das Schlagwort von der *Krise als Chance* wird von vielen Seiten überstrapaziert. Doch selbst im reformunwilligen Österreich wird es Diskussionen über grundlegende Reformen – zu nennen sind vor allem die Bereiche Bildung, Gesundheit, Pensionssystem und die Staats- und Verwaltungsreform – geben müssen. Zwar sind hier bisher kaum Signale bemerkbar, doch der Druck wird steigen und grundlegende Reformen werden unausweichlich werden.

Um Paul Romer von der Stanford University zu zitieren: "A crisis is a terrible thing to waste." Als Mitbegründer der endogenen Wachstumstheorie ist Paul Romer davon überzeugt, dass Wachstum kein vom Schicksal abhängiger Faktor ist, sondern einzig und allein vom Willen und der Bereitschaft der Menschen abhängt, ihr Leben produktiver und innovationsreicher zu gestalten. Fortschritt geht erfahrungsgemäß immer Hand in Hand mit Wettbewerb oder eben mit Krisenzeiten, in der durch den „Druck der knappen Ressourcen" die vorhandenen Gelder noch effizienter eingesetzt werden müssen. Wachsende Budgetdefizite und ein Rückfall in der Lissabon-Agenda waren in Europa anscheinend nicht Anlass genug, um konsequent Strukturreformen umzusetzen. Hoffentlich wirkt die aktuelle Krise in diesem Zusammenhang wie der dringend benötigte Weckruf.

Das Besondere an der Krise: Sie trifft alle

Eine Besonderheit dieser Krise ist, dass sie Auswirkungen in allen Bereichen hat. Getroffen werden somit auch grundsolide „gesunde" Unternehmen. Die kürzlich erschienene Studie der OeNB zur Kreditklemme bestätigt das Phänomen, dass nicht nur die langfristigen Finanzierungen überproportional gefährdet sind, sondern auch die großen Unternehmen besonders unter der Kreditklemme leiden. Die Krise unterscheidet also nicht mehr zwischen „Groß" und „Klein" oder „Gut" und „Schlecht" – sondern sie trifft alle. Bei einer „normalen" Krise wären möglicherweise nur Marginalanbieter betroffen, nicht aber dieses Mal.

Daher war es essentiell, dass die österreichische Bundesregierung im Rahmen des Unternehmensliquiditätsstärkungsgesetzes die Möglichkeit zur

Überbrückung vorübergehender Liquiditätsengpässe in Unternehmen schafft, die zum Stichtag 1. Juli 2008 eine gesunde wirtschaftliche Basis aufweisen. Das Instrument teilweise staatlich garantierter Kredite für mittlere und größere Unternehmen, die zu den nationalen oder regionalen Stützen der Wirtschaft zählen, ist absolut richtig gewählt und erlaubt die nötige Flexibilität in der Anwendung.

Ein Hauptgrund für die beispiellosen Auswirkungen der Krise ist vor allem der Zusammenbruch des Exports. Die WTO rechnet heuer mit einem Rückgang des Welthandels um rund 9 % (die OECD sogar um 13 %) – dem stärksten Rückgang seit 1948. Die österreichische Industrie hat heute eine Exportintensität von 58 %. Mehr als die Hälfte des Umsatzes wird also exportiert. In einigen Branchen wie bei der Metall- oder Papiererzeugung sind es sogar 68 % und bei der chemischen Industrie gar 72 %. Ein Wegbrechen des Exportes trifft heute alle – Unternehmen, Arbeitnehmer, den Staat und die privaten Haushalte.

Die Aufgabenbereiche der Wirtschaftspolitik sind dabei zwar nicht unbedingt neu – aber neu ist das Spektrum: zum ersten Mal muss eine kurz-, eine mittel-, und eine langfristige Aufgabenstellung gleichzeitig bewältigt werden und angesichts der Krise neu definiert oder zumindest geschärft werden. Das schwierige dabei ist nicht nur die Prioritätensetzung, sondern auch, weitgehend zu verhindern, dass die einzelnen Phasen in Konflikt miteinander stehen.

1. Kurzfristig: Exit-Strategie aus der Krise

Die kurzfristige Aufgabe ist – diese ist natürlich von höchster Priorität – eine möglichst effektive und effiziente Exit-Strategie aus der Krise umzusetzen. Hier gibt es zwei unumstößliche Prioritäten für die Krisenfeuerwehr: Die Überwindung der Finanzierungsengpässe und die Eindämmung der Arbeitslosigkeit.

Zum ersten wurde aufgrund der Krise wieder deutlich, dass es in der Wirtschaft um Zusammenarbeit geht: Die Industrie braucht die Kreditwirtschaft, die Kreditwirtschaft braucht die Industrie. Ohne Funktionieren der Banken gibt es keinen „Blutkreislauf" der Wirtschaft. Wir müssen gemeinsam mithelfen, dass die Banken jene Liquidität haben, um die Liquidität der Unternehmen sicher zu stellen. Das Bankenpaket war ein erster Schritt, und das schon erwähnte Unternehmensliquiditätsstärkungsgesetz von 10 Mrd EUR für staatlich besicherte Kredite im Rahmen des Bankenpakets ist die wichtige und notwendige Weiterentwicklung. Es geht jetzt konkret darum

zu verhindern, dass gesunde Unternehmen (und deren Mitarbeiter) unverschuldet von durch die Krise verursachten Liquiditätsengpässen in Probleme geraten oder gar Schlimmeres. Aber auch den nächsten Schritt dürfen wir nicht aus den Augen verlieren: Neben der kurzfristigen Finanzierung der Betriebsmittel muss zusätzlich auch mittelfristig die Eigenkapitalausstattung der Unternehmen gestärkt werden, sonst

drohen zwar nicht liquiditätsbedingte Insolvenzen, aber im Zuge der allgemeinen De-Leveraging-Bestrebungen könnte es zu einer dramatischen Werthaltigkeitserosion der Produktionsmittel mangels Fortführungsperspektive der Unternehmen kommen.

Beim Arbeitsmarkt geht es vor allem darum, qualifizierte Arbeitskräfte in und vor allem für die Zeit nach der Krise nicht zu verlieren. Jetzt liegt es auch hier an der Politik, rasch und umsichtig zu handeln, nicht zu reagieren – und vor allem tabufrei zu agieren. Denn treffsichere – allenfalls auf die Dauer der Krise befristete – arbeitsmarktpolitische Maßnahmen, die der Tiefe der Krise gerecht werden, müssen getroffen werden. Dazu zählt ein für die Unternehmen leistbares und Arbeitsplätze erhaltendes Kurzarbeitsmodell genauso, wie eine – der österreichischen Tradition folgend – verantwortungsvolle Lohnpolitik, die auch und gerade jetzt im Interesse des Erhalts von Arbeitsplätzen auf die internationale Wettbewerbssituation des Wirtschafts- und Arbeitsstandortes Österreich bedacht nimmt. Der richtige Ort für eine derartige Diskussion ist jedenfalls ganz sicher nicht die Straße!

2. Mittelfristig: Potentialwachstum festigen und ausbauen

Mittelfristig müssen die Wirtschaftspolitiker auch daran denken, das Potentialwachstum wieder herzustellen, es zu festigen und es im Sinne der Zukunftsfähigkeit sogar noch weiter auszubauen. In Zeiten des knappen Gelds ist das sicher eine besondere Herausforderung und die gemeinsamen europäischen Anstrengungen bei der Konjunkturbelebung dürfen nicht darüber hinwegtäuschen, dass sich die Wettbewerbsfähigkeit im Euroraum bereits vor der Krise auseinander entwickelt hat (Sonderbericht über den Euroraum der EU-Kommission, Q2/2009). Während Deutschland, Finnland, und Österreich ihre Preis- und Kosten-Wettbewerbs-Fähigkeit im Vergleich mit den übrigen Staaten des Euroraums in den vergangenen zehn Jahren verbessert haben, haben Staaten wie Griechenland und Spanien an Wettbewerbsfähigkeit verloren. Die Hauptursache ist die enttäuschende Produktivitäts- und die zu hohe Lohnentwicklung. Die niedrigen Realzinsen und der Wegfall des Wechselkursrisikos haben einen hohen Kapitalzufluss ermöglicht, der nicht immer für die produktivsten Zwecke genutzt worden ist. Statt in Investitionen ist das Geld vor allem in den Konsum geflossen. Diese Staaten müssen nun die Produktionskosten und die Preise im Exportsektor senken und die Investitionen und Ressourcen vom geschützten Binnensektor in den Exportsektor verschieben. Hier ist Allokations-, und nicht Distributionspolitik gefragt, und damit ein Weg zur Steigerung der Produktivität.

Wir lernen daraus, dass ein Übermaß an vorhandenen Geldmitteln nur selten dorthin fließt, wo die Produktivität gefördert wird und damit das Potentialwachstum für die Zukunft

ausgebaut wird. Den Umkehrschluss, dass in Zeiten des knappen Gelds eine umso effizientere Allokationspolitik betrieben wird, den muss unsere Wirtschaftspolitik nun beweisen! In den Konsum und damit die unmittelbare Konjunkturankurbelung wurde in den vergangenen sechs Monaten genug investiert. Angefangen vom Kaufkraftpaket im September von über 1,8 Mrd EUR bis hin zur Tarifentlastung und dem Familienpaket der Steuerreform, die zusammen über 2,8 Mrd EUR kosten. Das Ergebnis: der private Konsum wird auch heuer in Österreich (als fast einzigem OECD-Land) steigen, während die Investitionen voraussichtlich um einen zweistelligen Prozentsatz fallen werden. Wegen der starken Importlastigkeit des privaten Konsums in Österreich hat die OECD den Transfers an die privaten Haushalte im österreichischen Konjunkturpaket eine Multiplikatorwirkung von nur 0,2 errechnet und damit einen der niedrigsten Werte aller Industriestaaten.

Bei der mittelfristigen Strategie geht es also darum: Wie schaffen wir es, möglichst stärker als andere aus dem konjunkturellen Wellental zu kommen? – Mehr Forschung und mehr Investitionen in eine bessere Infrastruktur. Bei der Forschung hat erst kürzlich das WIFO berechnet, dass eine Steigerung der F&E-Intensität um 10% eine Beschleunigung des Beschäftigungswachstums um 0,6 bis 1,8 Prozentpunkte pro Jahr bewirkt. Wir brauchen daher Sicherstellung ausreichender Finanzierung im F&E-Bereich. Bei den Infrastrukturinvestitionen insbesondere im Energiebereich (Leitungen, Kraftwerke) gäbe es sogar einen Win-Win-Situation zwischen kurzfristiger Konjunkturankurbelung und langfristigem gesteigerten Potentialwachstum. In diesem Zusammenhang müssen nicht zuletzt die Genehmigungsverfahren beschleunigt werden. Nach wie vor bestehende Regelungen und mangelnder politischer Mut verhindern noch immer Investitionen in einem der wenigen Bereiche wie dem Kraftwerksbau, in dem die Unternehmen selbst rasch investieren könnten und wollten.

3. Langfristig: Durch Nachhaltigkeit weitere Krisen verhindern

Und schließlich wird es die langfristige Aufgabe der Wirtschaftspolitik sein, weitere Krisen zu verhindern – vor allem Krisen, die bereits heute vorhersehbar sind. Eine davon ist die Schuldenbelastung durch die demographische Entwicklung. Es geht also um Bereiche wie die Gesundheits-, die Staats- und Verwaltungsreform oder die weitere Gestaltung des Pensionssystems. Darüberhinaus ist von besonderer Bedeutung unser Bildungs-, Forschungs- und Innovationssystem der Zukunft. Das Delegieren etwa der Staats- und Verwaltungsreform an eine neue Arbeitsgruppe unter Leitung des Rechnungshofes wird da beispielsweise nicht reichen. Es bedarf der wirklichen politischen Umsetzung der Vorschläge.

Zum Abschluss, möchte ich kurz umreißen, wie im Sinne der langfristigen Krisenbewältigung der Wirtschaftspolitik sicher nicht vorgegangen werden soll: Die Debatten über die Vermögensbesteuerung beweisen, dass in Österreich gerne der Weg des geringsten Widerstands gegangen wird. Statt auf der Ausgabenseite Konsolidierungsdruck auszuüben, wird lieber zuerst über die Einnahmenseite nachgedacht. Österreich ist bereits heute ein Hochsteuerland und daran kann auch die verzerrte internationale Statistik der Vermögensbesteuerung nicht hinwegtäuschen, in der Österreich rein statistisch im unteren Bereich liegt, weil z.B. über Gemeindgebühren (Was-

ser, Abwasser, Müll) extra finanziert wird, was in anderen Ländern über die Grundsteuer finanziert wird.

Die wirtschaftlichen Folgen der derzeitigen Krise sind bereits sowohl für die Unternehmen wie auch für die Arbeitnehmer spürbar. Wir haben aber die konjunkturelle Talsohle noch nicht erreicht, auch wenn sie langsam in Sicht kommt. Jetzt ist es umso wichtiger die richtigen wirtschaftspolitischen Schwerpunkte zu setzen. Sie entscheiden nicht nur darüber wie gut wir durch diese Krise kommen werden, sondern entscheiden bereits heute über die Wettbewerbsfähigkeit des Standorts in der nächsten Phase des wirtschaftlichen Aufschwungs.

Erich Foglar

Präsident des Österreichischen Gewerkschaftsbunds

Konzentration auf Wachstum und Beschäftigung

Letztlich ist die gegenwärtige *große Krise* von der Einstellung ausgegangen, dass wirtschaftliche Abläufe nicht durch den Staat gelenkt werden dürften, weil der Markt für die richtigen und besseren Entscheidungen sorgen würde. Und das wäre nicht lediglich für einige wenige Individuen sondern in unserer Zeit für die ganze Welt das Beste.

Ausgehend vom Finanzsektor erfolgte schrittweise eine internationale Deregulierung aller Wirtschaftssektoren, die eng mit der Mitgliedschaft von Staaten in internationalen Institutionen wie dem IWF oder der OECD verknüpft ist. Infolge der Finanzkrisen in den 1990er Jahren (Asien, Mexiko, Russland, Argentinien, Türkei) wurde dieser Systemfehler sichtbar. Um darauf hin international akkordierten staatlichen Regulierungen zuvorzukommen, wurde das Konzept der *Selbstregulierung* forciert.

Ab den frühen 1990er-Jahren des vorigen Jahrhunderts wurde ebenfalls international akkordiert im Wege des WTO-Systems begonnen, die Waren- und Dienstleistungsmärkte zu liberalisieren – einschließlich der Arbeitsmärkte und der Systeme der sozialen Sicherheit und ausdrücklich ohne Re-Regulierungsbefugnisse.

Das zunehmende wirtschaftliche Gewicht einer Reihe weiterer Länder zeigt sich daran, dass nunmehr die Koordination der wichtigsten Länder sich vom Kreis der OECD/G-7-Länder in jenen der G-20 zu verlagern scheint. Der Anstieg des Welthandels überdeckte längere Zeit die gravierenden außenwirtschaftlichen Ungleichgewichte zwischen den großen Wirtschaftsmächten. Sie wurden aber spätestens mit dem Ausfall der USA als *Konsument* unübersehbar – ohne dass bislang eine andere Region die Rolle der Konjunkturlokomotive zu übernehmen bereit wäre.

Mit einem Anteil von weniger als 1% am Welt-BIP ist ein Ausscheren Österreichs aus der EU bei gleichzeitigem Bewahren des wirtschaftlichen und sozialen Erfolgs pure Illusion. Die Aufgabenstellung ist vielmehr, die richtigen Schlussfolgerungen aus der Krise zu ziehen und innerhalb der EU die dazu notwendigen Reformschritte zu unterstützen.

Im Hinblick auf den Finanzsektor zeigt sich nun das Ausmaß des privaten Scheiterns und die Versäumnisse seitens der Politik regulierend einzugreifen. Nun kann nur mehr der – zuvor so verpönte – Staat rettend eingreifen und die Sanierung unterstützen. Dieser Unterstützung durch den Staat muss nun aber die erforderliche Regulierung des Finanzsektors und dessen Aufsicht im internationalen Gleichklang folgen.

Bei der weltweiten Reform des Finanzsektors geht es nun darum, dass dieser anstatt den Herrn zu spielen, wieder seine dienende Rolle an der Wirtschaft und Gesellschaft einnimmt. Nach der Krise zum Status quo zurückzukehren darf nicht mehr möglich sein.

Aus Arbeitnehmersicht muss es dazu strenge Auflagen und Regeln geben. Wenn die öffentliche Hand die Banken unterstützt, dann muss das Geld in den Wirtschaftskreislauf kommen, um die Wirtschaftsentwicklung zu unterstützen und Arbeitsplätze zu erhalten. Denn wenn die Steuerzahler das Risiko tragen sollen, dann müssen sie auch an künftigen Gewinnen beteiligt werden und einen fairen Anteil an der künftigen Wertsteigerung bekommen. Die Aufsicht muss mehr Biss bekommen. Rating Agenturen, die massiv zur Entstehung der Krise beigetragen haben, sind künftig ebenfalls der

Regulierung und Aufsicht zu unterwerfen. Diese Agenturen bewerten Firmen und Banken, von denen sie selbst bezahlt werden. Und schließlich muss es für die staatlich geförderte kollektive Altersvorsorge ein Sicherheitsnetz geben.

Die Europäische Union hat bisher stark auf den Wettbewerb (Zielsetzung: dynamischster, wissensbasierter Wirtschaftsraum) gesetzt und der Entwicklung seiner Binnennachfrage weniger Gewicht beigemessen. Wohl wird der wirtschaftliche Erfolg weiterhin zwischen Arbeit und Kapital aufgeteilt werden. Aber die Entwicklung der Lohnsumme, derjenige Teil, der den Arbeitskräften in Form von Löhnen und Gehältern zufließt, ist seit längerer Zeit rückläufig, während sich die Aktienindizes als Ausdruck der unternehmerischen Vermögenswerte in die gegenläufige Richtung bewegten.

Die Selbstregulierung der Wirtschaft hat in einem historischen Ausmaß versagt bzw. maßgeblich die gegenwärtige Krise verursacht.

In der Krise kommt nunmehr wieder die Sorge vor sozialen Revolten auf. Der Ankündung einer neuen Ethik in den Vorstandsetagen muss die Praxis im Tagesgeschäft folgen. Letztlich wird die (europäische) Wirtschaftspolitik beim Weg aus der Krise die ungleicher gewordene Einkommensverteilung korrigieren müssen. Auch das bedeutet Reform und ist nicht als Sache der Ebene der Mitgliedstaaten verschiebbar: Denn damit die Bevölkerung an das europäische Projekt weiter glauben kann, muss sie erkennbar am wirtschaftlichen Erfolg teilhaben können. Und dabei geht es um die elementaren Fragen, die von der europäischen Wirtschaftspolitik bislang an den Markt zur Lösung abgeschoben wurden: Vollbeschäftigung, faire Löhne, kollektiv organisierte soziale Sicherungssysteme sowie gut ausgebaute öffentliche Dienstleistungen.

Aber genau das kann der Markt nicht leisten. Und auch andere wichtige Bereiche sind vernünftigerweise nicht bloß dem Markt zu überlassen, sondern es sind ihm vielmehr Rahmen zu setzen.

Die europäische Union hat zu Recht eine Dekade lang Forschung, Entwicklung, Ausbildung, Wissen als strategische Komponente ihrer Wirtschaftspolitik verfochten. Das kumulierte Wissen in den Unternehmen und bei den Beschäftigten ist aber jetzt zum Objekt der Begierde der globalen Partner Europas geworden – und in Krisenzeiten oftmals billig zu erwerben. Im Gegensatz zu den USA – die kein Problem damit haben, bestimmte Wirtschaftsbereiche oder Unternehmen als strategisch wichtig anzusehen und somit vor ausländischen Übernahmen bewahren und notfalls auch zu verstaatlichen – scheint in Europa der beinahe naive Glaube an den Wettbewerb derartigen Schutzmaßnahmen entgegenzustehen.

Mit der Budgeterstellung im gegenwärtigen wirtschaftlichen Umfeld wird den öffentlichen Haushalten über die

automatischen Stabilisatoren hinaus eine stärkere aktive Rolle zukommen müssen. Bei aller Notwendigkeit ist dies für die europäischen Länder wie für die Europäische Union aus vielerlei Gründen keine einfache Aufgabenstellung.

Die bislang fehlende europäische Unternehmensbesteuerung, die Mechanismen des Finanzausgleichs, die Fokussierung der Wirtschaftspolitik auf den Wettbewerb, die Interpretation bzw. Anwendung des Stabilitätspaktes, die Spielräume der Zentralbank und nicht zuletzt die ungelöste soziale Dimension Europas stehen auf dem Prüfstand.

Das vollzieht sich in einer Phase hoher prognostischer Unsicherheiten angesichts der internationalen Wirtschaftskrise, die gegenwärtig keinen sicheren mittelfristigen Planungshorizont zulässt. Bei den diesbezüglich veröffentlichten Zahlenwerken handelt es sich um miteinander konsistente Annahmen, mit denen ein möglicher Pfad der Wirtschaftsentwicklung abgebildet wird.

Nicht nur Österreich und die EU-Mitgliedstaaten werden in weiterer Folge Überlegungen zur Budgetkonsolidierung anstellen, sondern wohl auch die EU selbst, deren Einnahmen aufgrund der Rezession hinter dem beschlossenen Ausgabenrahmen 2007 bis 2013 bleiben werden. Den Stabilitätspakt wie bisher anzuwenden, würde die das Wachstum dämpfenden Effekte nach 2010 potenzieren – mit der Gefahr, dass bereits in einem Frühstadium der nächste Konjunkturaufschwung wieder abgewürgt wird.

Aus der Sicht des ÖGB muss der künftige Maßnahmenmix so gewählt werden, dass negative Auswirkungen auf Wachstum und Beschäftigung so gering wie möglich gehalten werden. So gehen etwa von der Erhöhung der Besteuerung des Vermögens deutlich geringere negative Effekte auf die Nachfrage aus als von einer Erhöhung der Umsatzsteuer. Die Einführung einer Finanztransaktionssteuer soll von der österreichischen Regierung unterstützt werden.

Monika Kircher-Kohl

CEO
Infineon Technologies Austria AG

Innovationsoffensive zur Bekämpfung der Krise

1 Das Umfeld

Wir erleben derzeit eine wirtschaftliche Situation, die von vielen als die größte Wirtschaftskrise seit den 1930er-Jahren beschrieben wird. Es ist derzeit noch zu früh, um eine Bewertung der derzeitigen Situation abgeben zu können. Die Wirtschaftswissenschaften sind zwar in der Lage, die Ursachen der derzeitigen Krise gut zu beschreiben; bei der Analyse der derzeitigen Situation und vor allem bei einer auch nur annähernden Prognose scheiden sich die Geister. Von Deflation bis zur Hyperinflation, von einer kurzen Flurbereinigung bis zur größten und längsten Krise, von denen die bereits den nächsten Aufschwung sehen und jenen, die glauben, wir stehen erst am Anfang eine Krise; dies und vieles weiteres ist derzeit zu lesen.

Noch vielfältiger sind die Rezepte, die angeboten werden, um aus der Krise herauszufinden oder auch nur um die Auswirkungen der derzeitigen Situation abzumildern. Anwerfen der Notenpresse, Verstaatlichungen, Lohnverzicht, sind Schlagworte, die vor ein paar Monaten noch undenkbar gewesen wären.

Es wäre vermessen, hier einen der derzeit kursierenden Vorschläge als den Ausweg zu präsentieren, oder den bisherigen Varianten eine neue hinzuzufügen.

Ich kann jedoch einige Maßnahmen anführen, die die Industrie, insbesondere die Halbleiterindustrie unternimmt, um diesen Industriezweig vor allem in Europa gut durch die derzeitige Situation zu führen und für die Zeit nach der Krise gut aufzustellen. Daraus folgen auch Forderungen an die Wirtschaftspolitik.

2 Ein Blick auf die Halbleiterindustrie

Eine Prämisse ist wichtig, wenn wir die derzeitige Situation betrachten. Die Halbleiterindustrie in Europa setzt sich aus im Kern gesunden Unternehmen zusammen. Schon bisher war dieser Wirtschaftszweig von großen Auf- und Abschwüngen gekennzeichnet. 1997 betrug das Weltwirtschaftswachstum noch 3,7%, für die Halbleiterindustrie bedeutete das ein Wachstum von 3,8%. Im Jahr 1998 ging das Weltwirtschaftswachstum auf 2,3% zurück, für die Halbleiterindustrie bedeutete das ein Minus von über 8%. Eine besonders extreme Situation erlebten wir bekanntlich 2000/2001. Das Weltwirtschaftswachstum verringerte sich von +4,11% im Jahr 2000 auf 1,5% im Jahr 2001. Die Halbleiterindustrie erlebte im gleichen Zeitraum einen Wandel von +37% auf –31,8%! Auch jetzt sehen wir, dass die Umsätze der Halbleiterindustrie wesentlich stärker einbrechen als das Wirtschaftswachstum zurückgeht. Die Halbleiterindustrie hat sich jedoch – auch aus der Erfahrung der Vergangenheit – auf diese Situationen gut eingestellt und vorbereitet.

Diese Erfahrungen zeigen aber auch, dass sich nach einem solchen Abschwung in der Industrie einiges verändert. Infineon Technologies war im Bereich der Halbleiter für die Automobilindustrie jahrelang weltweit der zweitgrößte Lieferant. Unsere Anstrengungen und Vorbereitungen, die wir bereits in guten Zeiten unternommen haben, haben dazu geführt, dass wir jetzt zur Nummer eins geworden sind.

Zu den Schwierigkeiten, aber auch Chancen, mit denen wir konfrontiert sind, zählen die hohe Exportquote, der Preisverfall bei Halbleiterprodukten

(Chips gleicher Leistung werden pro Jahr etwa 7% billiger), Qualitätsanforderungen die jene der Luftfahrtindustrie übersteigen und Innovationszyklen von nur zwei bis drei Jahren.

Die Halbleiterindustrie unterscheidet sich wesentlich von den vielen Unternehmen, die die Krise 2001, die mittlerweile zu Recht auch die Bezeichnung *Dotcom-Krise* trägt, nicht überlebt haben. Damals wurden täglich neue Unternehmen gegründet und diese Unternehmen wurden aberwitzig hoch bewertet. Die Aktienkurse und die Firmenwerte bzw. die erwirtschafteten Gewinne standen in keinerlei vernünftigem Verhältnis. Kredite wurden bis ins Jahr 2001 an *Start-ups* genauso leichtfertig vergeben wie in den vergangenen Jahren an viele amerikanische Hauseigentümer. Die Halbleiterindustrie von heute ist im Großen und Ganzen solide aufgestellt. Wir haben das Problem möglicher Überkapazitäten besser in den Griff bekommen. Die Halbleiterindustrie ist allerdings auch besonders kapitalintensiv. Bei den derzeitigen Schwierigkeiten Finanzierungen zu beschaffen, stehen jedoch auch gesunde Unternehmen vor echten Existenzproblemen.

3 Die Halbleiterindustrie ist eine Schlüsselindustrie

Die europäische Halbleiterindustrie ist aber nicht nur eine im Kern gesunde Industrie; sie ist auch eine Schlüsselindustrie, die für andere europäische Wirtschaftszweige enorm wichtig ist. Ich denke hier vor allem an die Automobilindustrie, aber auch an die Hersteller von Leuchtmittel, von Kraftwerken und Lokomotiven, die großen Handyhersteller, und Unternehmen, die von einfachen Kundenkarten bis zu Kreditkarten und Reisepässen sicherheitsrelevante Produkte herstellen. Außerhalb Europas sind hier vor allem die Hersteller von PCs und Servern, von Unterhaltungselektronik zu erwähnen. Sie alle profitieren von Chips, die unter anderem in Europa gefertigt werden. Vor allem die innovativsten Mikrochips stammen aus Europa. Die Halbleiterindustrie ist für 10% des europäischen Bruttoinlandsprodukts relevant.

3.1 Die Halbleiterindustrie ermöglicht Energieeinsparungen

Wir kommen hier zu einem der wesentlichsten Punkte. So unscheinbar Mikrochips auch scheinen mögen; so wichtig sind sie für die gesamte gesellschaftliche und wirtschaftliche Entwicklung. Infineon zum Beispiel forciert hier unter anderem das Thema Energieeffizienz. Mit dem richtigen Einsatz von Chips der neuesten Generation lässt sich der Standby-Verbrauch von Elektrogeräten um bis zu 90% reduzieren. Europaweit lässt sich dadurch etwa die elektrische Energie einsparen, die der Produktion durch ein Atomkraftwerk entspricht (1800 MW). Aus einer weltweit beachteten und führende Studie ergibt sich, dass durch den gezielten Einsatz von Informations- und Kommunikationstechnologien (IKT) bis zum Jahr 2020 15% des weltweiten CO_2 Ausstoßes vermieden werden können. (The Climate Group, Smart 2020, Enabling the Low Carbon Economy in the Information Age, 2008). Die Halbleiterindustrie ist der Schlüssel, um dies zu ermöglichen (EICTA, High Tech: Low Carbon, The Role Of The European Digital Technology Industry in Tackling Climate Change, Brüssel 2008).

Die Beispiele sind vielfältig. Sie alle hier aufzulisten, sprengt den zur Verfügung stehenden Rahmen. Zusammenfassend lässt sich sagen, dass die Halbleiterindustrie in Europa einen entscheidenden Beitrag zur Energieeffizienz und damit zu einer Reduktion des Ausstoßes von CO_2 leistet.

3.2 Die Halbleiterindustrie als Innovationstreiber

Wir müssen daher bestrebt sein, diese Industrie in Europa zu halten und zu stärken. Was unternimmt die Industrie dafür? Am Beispiel von Infineon kann ich Ihnen sagen, dass wir uns nicht auf Erfolgen ausruhen, wir arbeiten derzeit bereits an Lösungen von Morgen und Übermorgen, vor allem den Bereich Energieeffizienz betreffend. Wir arbeiten unter anderem an Themen der neuen Beleuchtung (Stichwort „LED"), erneuerbare Energien („Solarenergie") sowie am Thema Elektro-Mobility. Gerade beim zuletzt genannten Thema zeigt sich die Bedeutung der Halbleiterbranche. Vom Kraftwerk, über die Energieübertragung und –verteilung, über die Batteriemanagementsysteme und der Abrechnung sind Mikrochips unerlässlich. Wir analysieren hier Modelle und entwickeln Produkte für Elektro-Mobility sozusagen „vom Kraftwerk bis zum Reifen".

Um dies leisten zu können, ist bei Infineon Technologies die Innovation nicht nur ein Schlagwort, sondern ein ständiger Prozess, der gut beobachtet und bei Bedarf neu definiert wird. Innovation bedeutet hier nicht (nur) die Entwicklung neuer Produkte, sondern das Entwickeln einer Forschungskultur, das Investieren in Weiterbildung, das Vorantreiben einer gezielten Personalentwicklung und das Fördern von Führungskompetenz.

4 Rahmenbedingungen

Wir brauchen aber auch Rahmenbedingungen, um dies umsetzen zu können. Wir benötigen Forscher, die in diesen Gebieten zur Weltspitze gehören. Alleine in Österreich sind für das Jahr 2010 in den 15 Fachrichtungen mit den größten Arbeitsmarktengpässen mit einem Fehlen von 1.000 Graduierten zu rechnen (Schneeberger und Petanovitsch, Techniker/innenmangel trotz Hochschulexpansion, Wien, 2006). Ich denke, dass die derzeitige Arbeitsmarktsituation im Bereich der Spitzenkräfte Entspannung bringen wird.

4.1 Bildungs- und Innovationsoffensive notwendig

Das heißt aber, dass wir eine Bildungsoffensive benötigen, die diesen Namen auch verdient. In der Schuldiskussion

der letzten Wochen wurde leider von allen Seiten verabsäumt, an der Qualität der Ausbildung zu arbeiten. Die entsprechenden Vorschläge sind bekannt, wie bei gleichem Mitteleinsatz das Ausbildungsniveau entscheidend verbessert werden kann (Erster und Zweiter Zwischenbericht der Expertenkommission „Zukunft der Schule"). Kurzfristig haben wir aber auch die Möglichkeit, die Krise für die Weiterbildung unserer Mitarbeiterinnen und Mitarbeiter zu nützen. Die zur Verfügung stehenden Möglichkeiten sind in Österreich für „normale Zeiten" gut, in den Zeiten die wir jetzt erleben könnten noch wesentlich mehr Beschäftigte die Zeit für eine Höherqualifizierung nützen, wenn entsprechende Fördermaßnahmen zur Verfügung stünden.

Wir benötigen aber über die Humanressourcen hinaus eine Kultur, die der ehemalige finnische Ministerpräsi-

dent Esko Aho als Kultur beschrieben hat, die *Innovation zelebriert* (Expertengruppe unter Vorsitz von Mr. Esko Aho, Creating an Innovative Europe): Wir müssen europäische Leitmärkte definieren, wir müssen die Kraft von Mindeststandards (z. B.: im Bereich Energieverbrauch von Produkten) nutzen, wir müssen das öffentliche Beschaffungswesen anpassen.

Eine solche Innovationsstrategie fehlt in Österreich. Finnland geht hier mit gutem Beispiel voran. Die finnische Innovationsstrategie ist geleitet von: Wahl von Spitzenkompetenz-Schwerpunktbereichen, die Schaffung besserer Voraussetzungen für radikale Innovationen und noch intensivere Nutzung der verfügbaren Kompetenz. Ähnliches benötigen wir in der gesamten europäischen Union und in jedem einzelnen Land.

4.2 Die Halbleiterindustrie als europäische Schlüsselindustrie

Es bedarf aber vor allem eines europäisches *Commitments,* das die Halbleiterindustrie zur Schlüsselindustrie erklärt. Die Halbleiterindustrie benötigt frisches Kapital um Innovation treiben zu können, und um Produktionsstandorte in Europa zu halten und zu modernisieren. In der derzeitigen Situation ist es mehr oder weniger unmöglich, Eigenkapital oder Fremdkapital zu generieren. Chinesische Investoren bieten beides, jedoch mit der Folge, dass das Know-how und Fertigungskapazitäten über kurz oder lang aus Europa abgezogen wird.

4.3 Finanz- und wirtschaftspolitische Maßnahmen

Obwohl die Zinssätze der europäischen Zentralbank historische Tiefststände erreichen, sind Unternehmenskredite nicht oder nur zu untragbaren Konditionen erhältlich. Es scheint so, als ob Unterstützungsmaßnahmen der letzten Monate, nicht zum erwünschten Ziel geführt haben. Die Sicherstellung der Refinanzierung im Bankensektor hat den größeren Unternehmen, die auf das Kapital angewiesen sind, keine Erleichterung gebracht. Wir benötigen daher Maßnahmen, die es Banken ermöglichen, wieder Unternehmenskredite zu vergeben. Ich denke hier an Staatsgarantien für Industriekredite oder an Staatsgarantien für Industrieanleihen. Die Ankündigung eines Haftungspakets für Industriekredite in der Höhe von 10 Mrd EUR war ein wichtiger Schritt in die richtige Richtung. Es geht jetzt vor allem um eine rasche Umsetzung, da wir bereits genug Zeit verloren haben.

Darüber hinaus sind Maßnahmen notwendig, die die Kaufkraft der Arbeitnehmer erhält und somit einer wachsenden sozialen Kluft vorbeugen. In Zeiten, in denen Unternehmen keine Gehaltserhöhungen gewähren können, sind Steuersenkungen und Erhöhungen von Transferleistungen unerlässlich, um die Kaufkraft im Inland aufrecht zu erhalten. Wir müssen uns aber auch – und vor allem – darüber Gedanken machen, wie langfristige Arbeitslosigkeit vermieden werden kann, wenn die Krise länger andauern sollte. Steuerungsmaßnahmen vor allem in Richtung energieeffiziente Produkte wären hier denkbar.

Ich bin überzeugt davon, dass die europäische Halbleiterindustrie aus der gegenwärtigen Krise gestärkt hervorgehen kann. Und zwar so, dass die europäische Halbleiterindustrie mit Abstand führend vor den Konkurrenten anderer Regionen ist, führend vor allem im Bereich der Innovationshöhe und der Produktivität.

Voraussetzung dafür ist eine Politik, die es – wie oben beschrieben – den Unternehmen ermöglicht, ihre Fähigkeiten weiter auszubauen und zu entwickeln.

Herbert Tumpel

Präsident der Bundesarbeitskammer

Wiederherstellung der Finanzierung durch die Banken

Europa und Österreich erleben die schwerste Wirtschaftskrise seit 1929. Seit dem Herbst des Vorjahres sind die Prognosen – nicht nur in Österreich – mehrfach nach unten revidiert worden. Laut der letztgültigen Prognose des Österreichischen Wirtschaftsforschungsinstituts (WIFO) halten wir bei –2,2% für 2009, aber eine weitere Revision nach unten ist zu erwarten. Die EU-Kommission prognostiziert sechs Wochen nach der letzten WIFO-Prognose –4% für Österreichs BIP 2009, und für den Euroraum ebenfalls –4%. In dieser Situation ist die Sicherung der Beschäftigung durch Stabilisierung der gesamtwirtschaftlichen Nachfrage die wichtigste Aufgabe der Wirtschaftspolitik, die bereit sein sollte, auf neuere Entwicklungen angemessen zu reagieren.

Das von der Regierung vorgelegte *Doppelbudget* für die Jahre 2009/10 weist eine eindeutige antizyklische Gestaltung auf. Das Bundesbudget trägt damit die Hauptlast der Auswirkungen der Rezession sowie der Maßnahmen zum Gegensteuern. Während das BIP 2009 (real und nominell) zurückgeht und auch 2010 nur wenig zunimmt, steigen die Ausgaben bereinigt um die nicht nachfragewirksamen Komponenten in beiden Jahren markant an, während die Einnahmen zurückgehen. Die budgetierten Maastricht-Defizite von 3,5% des BIP 2009 und von 4,7% 2010 tragen maßgeblich zu einer Abmilderung der Rezession und zu einer sozialen Abfederung ihrer Auswirkungen bei und sind als „expansiv" zu werten.

Die *Infrastrukturmaßnahmen der Konjunkturpakete stützen die Nachfrage* im Investitionsbereich, unter der Voraussetzung einer raschen Umsetzung der einzelnen Maßnahmen. Durch die Steuersenkung wird relativ kurzfristig über eine Erhöhung des privaten Konsums Nachfrage für andere Produktionsbereiche geschaffen. Im Verhältnis zum BIP sind diese Nachfrageimpulse durchaus beachtlich (laut Schätzung der Oesterreichischen Nationalbank wird das BIP durch die Konjunkturmaßnahmen 2009 um 0,8% und 2010 um 1,4% höher ausfallen als ohne diese Maßnahmen) – aber angesichts der neuerlichen Verschlechterung der Situation doch nicht ganz ausreichend.

Zum größeren Teil erfolgt die Zunahme des Defizits *passiv*, d. h. durch geringere Einnahmen an Steuern und Sozialbeiträgen, bei steigenden Ausgaben aufgrund der gegebenen Ansprüche. Diesen *automatischen Stabilisatoren kommt eine entscheidende Rolle* dabei zu, dass negative Zweitrundeneffekte aus dem Absinken der Beschäftigung und aus dem Rückgang von Steuer- und Sozialbeitragseinnahmen vermieden oder wesentlich gedämpft werden. Der Sozialstaat hat eine wichtige Funktion bei der Stabilisierung der Konjunktur im Abschwung, gleichzeitig wird durch ihn das allgemeine Vertrauen der privaten Haushalte als Konsumenten in die zukünftige Wirtschaftsentwicklung gestärkt.

Die Bekämpfung der Arbeitslosigkeit muss oberste Priorität der Bundes-

regierung sein. Dies gilt umso mehr, wenn die neuen Wirtschaftsdaten und Prognosen für die österreichische Wirtschaft 2009 und 2010 wahrscheinlich schlechter ausfallen als bei der Budgeterstellung angenommen wurde. Es ist einnahmen- und ausgabenbedingt mit entsprechend höheren Defiziten zu rechnen. Das bedeutet, dass die Bud-

getpolitik die automatischen Stabilisatoren voll wirken lassen muss und dass gleichzeitig von der Politik zusätzliche Maßnahmen zur Stimulierung der Investitionen und des privaten Konsums gesetzt werden müssen. Als Maßnahme im Infrastrukturbereich kommen dafür in erster Linie Investitionshilfen (projektbezogene Zinsenzuschüsse) des Bundes an die Gemeinden für die Finanzierung eines kommunalen Infrastruktur- und Beschäftigungsprogramms in Frage. Zur Einkommensstärkung sollte die Ersatzquote bei der Arbeitslosenunterstützung und Notstandshilfe angehoben werden.

Mittelfristig hat sich die Bundesregierung eine *Konsolidierung* bzw. die Rückführung des Defizits unter die im Bundesfinanzrahmen bis 2013 angegebenen Werte zum Ziel gesetzt und spricht von „Einsparungspotenzialen", die aber nicht näher spezifiziert werden. Eine Absenkung des Defizits über die durch eine Verbesserung der Wirtschaftslage automatisch eintretende Konsolidierung hinaus erfordert Maßnahmen auf der Einnahmen- und auf der Ausgabenseite. Im gesamtwirtschaftlichen Zusammenhang müsste dabei darauf geachtet werden, dass die Konjunkturerholung nicht in einem Frühstadium bzw. durch Überdosierung abgewürgt wird, womit auch das Konsolidierungsziel verfehlt würde. Der Maßnahmenmix muss so gewählt werden, dass negative Auswirkungen auf das Wachstum und Beschäftigung so gering wie möglich gehalten werden. So etwa gehen von der Erhöhung der Besteuerung des Vermögens deutlich geringere negative Effekte auf die Nachfrage aus als von einer Erhöhung der Umsatzsteuer.

Denn durch die Steuersenkung bleibt den Menschen endlich wieder mehr verfügbares Einkommen, und dann kann der nächste Schritt doch nicht darin bestehen, durch eine *Nulllohnrunde* diese positiven Effekte wieder zu vernichten. Wer kann das jetzt wollen? Ein Blick zurück zeigt: Nach Abzug der Steuern und der Preissteigerung blieben den österreichischen Arbeitnehmern in den Jahren 2007 und 2008 im Durchschnitt um 0,3% bzw. 0,1% weniger netto übrig. Den Arbeitnehmern bliebe also trotz guter Abschlüsse immer weniger verfügbares Einkommen. Von 2000 bis 2007 musste das schlechter verdienende Drittel der Arbeitnehmer Reallohnverluste hinnehmen. Jetzt endlich lässt die erfolgte Steuersenkung erstmals seit Jahren wieder eine Steigerung der durchschnittlichen Nettoreallöhne erwarten. 2009 wird erstmals nach zehn Jahren wieder mit einem Zuwachs von mehr

als 2% gerechnet. Gerade Menschen mit geringem Einkommen wenden praktisch alle verfügbaren Mittel für Konsumausgaben auf, sie haben eine Konsumquote von praktisch 100%. Für einen Durchschnittsverdiener mit rund 1.800 EUR brutto monatlich bedeutet ein Lohnabschluss in Höhe von 3% ein Einkommensplus von 420 EUR netto im Jahr.

Eine Nulllohnrunde bedeutet für die Wirtschaft den Ausfall von Milliarden an Nachfrage, und der Effekt der Steuersenkung zur Erhaltung der Arbeitsplätze wäre aufgefressen. Die gesamte Brutto Lohnsumme in Österreich betrug 2008, 110,8 Mrd EUR, für 2009 wird sie mit 112,17 Mrd EUR prognostiziert. 1% der Lohnsumme entspricht also ca. 1,1 Mrd EUR also etwa die Hälfte der Lohnsteuersenkung.

Während die Investitionen 2009 laut WIFO real um über 5% sinken werden, hält sich der private Konsum gerade noch mit 0,4% real im Plus. Eine Nulllohnrunde würde auch den Konsum ins Minus drücken. Deswegen sind Nulllohnrunden ein konjunkturpolitischer Irrweg.

Entscheidend für eine Stabilisierung der Wirtschaftslage ist auch eine umgehende Wiederherstellung der *Finanzierungsfunktion des Kreditapparats und des Kapitalmarkts*. Mit dem Finanzmarktstabilisierungsgesetz wurden dafür neue Instrumente geschaffen, zusätzlich wird es ein Unternehmensliquiditätsstärkungsgesetz geben. Bei der Implementierung der Maßnahmen ist auf eine angemessene Verteilung der Risken zwischen dem Staat und den privaten Eigentümern zu achten.

Dominique Strauss-Kahn
Managing Director
International Monetary Fund

Crisis Management and Policy Coordination: Do We Need a New Global Framework?

Thank you. It is a great pleasure to be here, to address this timely conference, and to discuss the all-important issue of policy coordination in crisis management. I have been talking a lot lately about the need for cooperation in macroeconomic and financial policymaking, and that again is my theme today.

Decisions taken by countries based solely on their own national interest may end up hurting everybody. And – as happened often in the past – when this crisis broke, countries were not initially inclined to coordinate policies. Initial policies tended to be reactive, responding to the needs of particular institutions as they arose. These problems were particularly acute in the financial sector. Here, the authorities did not always respond effectively, in a coordinated manner, to the threats posed by systemic risks associated with large cross-border financial conglomerates.

Let me give you a few examples. As the crisis broke, countries acted in an uncoordinated manner to expand lender of last resort facilities, increase protection of creditors and depositors, and recapitalize banks with public funds. While countries reacted to the moves of others pretty quickly, the lack of coordination had some destabilizing effects, at least in the short term. In some cases, cross-border shifts in deposits took place. There have also been tendencies toward more explicit financial protection, where countries favor domestic lending and capital repatriation by cross-border banks.

I can point to distinct coordination failures with the Lehman bankruptcy and the collapse of the Icelandic banking system. When Lehman fell, countries moved immediately to ring-fence assets in their own jurisdictions. The case of Iceland was similar. Although Icelandic banks had a large number of nonresident depositors, the authorities failed to coordinate with the countries in question. Some of these countries ending up seizing Icelandic bank assets to protect their own depositors. Not the best outcome.

Mistakes were made, but policymakers learned from these mistakes, and are still learning. As the financial crisis evolved, and became more global, policy responses gradually became more coordinated. We saw the benefits of cooperation with the global fiscal stimulus, and with coordinated liquidity provision by central banks. We are now seeing signs of a more common approach to the cleansing of bank balance sheets. We also saw some recent agreements – brokered here in Vienna – with banks agreeing to keep supporting subsidiaries in Eastern Europe. I think this all augurs well for the future.

In my remarks today, I want to stress the importance of a coordinated approach to crisis management in macroeconomic and financial sector policymaking. I think countries have made great progress in taking a common approach to monetary and fiscal policy, as they search for solutions to this global crisis, but less so in financial sector regulation and supervision. Let me address each issue in turn.

Experience with Monetary Policy Coordination

Let me begin with monetary policy. Policymakers immediately deployed the monetary arsenal as the first line of defense against the crisis. What was different about this crisis was how far they were willing to go, both in terms of actions and coordination between countries. This coordination was mainly

informal – central banks followed the same path and innovated in similar ways – but was sometimes more explicit. Contrast this with the Great Depression, which was longer and deeper than it could have been because the monetary policy response was neither consistent nor coordinated.

As the crisis progressed, we saw successive waves of monetary policy action, as central banks went progressively further to prevent an economic freefall. In the beginning, central banks focused their attention on easing liquidity, to lubricate financial markets and get the machinery working again. They loosened the terms and availability of existing central bank facilities, expanded the range of counterparty institutions, and widened eligible collateral.

But as the crisis deepened, and uncertainty continued to smother activity, central banks went further than ever before. In the ground zero of the crisis, the Fed has been particularly fast and aggressive, cutting rates by a cumulative 500 basis points. Other major central banks have also slashed rates to historic lows, even if not to the same extent as the Fed. But they all traveled the same path together, and that is what is important.

But even that was not enough to do the job, and the ammunition began to run out as policy rates approached the zero bound. Central banks then began to move into new territory, deploying unconventional measures to resuscitate markets. Options on the plate included purchasing longer-term securities and providing credit directly to borrowers and investors. The tactics differed among central banks but the ultimate goals were similar. Remember, for most countries, this is uncharted waters – but the fact all were willing to jump in at the same time provided a needed boost to confidence.

I should note there were a couple of key occasions where the coordination became more explicit. First, there was an unprecedented coordinated cut in policy rates by six major central banks in October 2008 – by 50 basis points. Second, on the liquidity provision front, the Fed authorized temporary foreign exchange swap lines with 14 different monetary authorities. Today, the central banks in the United Kingdom, the euro area, Switzerland, and Japan all have access to unlimited swap lines across different maturities. This unique arrangement was designed to alleviate the global shortage of dollar funding, and represented a true global solution to a global problem.

Experience with Fiscal Policy Coordination

This crisis taught us that monetary policy was not enough, and that countries also needed to dip into their fiscal policy arsenal. As you know, the IMF has been out in front calling – as early as January 2008 – for a discretionary fiscal loosening for countries that can afford it. We made this recommendation because our forecasts suggested an exceptionally large and long-lasting decline in demand. We saw it as especially important to avoid the risks of deflation, which would wreak havoc on the economy by raising the debt burden and further impairing the financial sector.

Indeed, fiscal stimulus should be especially effective in current conditions. During these times, the prevailing uncertainty holds back lending, which reduces the effectiveness of monetary policy. It also makes it less likely that any fiscal expansion will be crowded out by higher interest rates. With constraints on credit, spending follows current income, which again boosts the effectiveness of any stimulus, especially

if directed toward the credit constrained.

But there is one key caveat – the fiscal stimulus needs to be coordinated. Fiscal stimulus is less effective in more open economies, as some of the spending feeds through to imports, benefiting output and employment in other countries. This is why collective action is so important, why countries must act in unison. If more countries act, the burden on each individual country is lessened.

It happened. Countries acted in a coordinated manner. Moving together, they delivered a global fiscal stimulus of 2% of GDP in 2009, exactly what we asked for a year ago. Although the coordination was not explicit, policymakers all did the same thing at the same time for the same reason. This was unprecedented, even if countries did not always receive due credit for this achievement. We are already seeing the payoff – IMF analysis suggests that the fiscal expansion boosted growth by between 1 and 3 percentage points this year, and up to a third of the gain comes explicitly from coordination.

Countries are still delivering stimulus for 2010. The jury is still out on whether this will be enough, or whether more may be needed.

Experience with Coordination of Financial Sector Regulation and Supervision

Let me now address cross-border financial sector supervision and regulation. Unlike in the macroeconomic sphere, the experience with cooperation here is more mixed, and there is still some way to go. Many of the coordination failures I noted at the beginning can be traced to explicit weaknesses in this area. We clearly need more coordination on this level. Let me talk a little about this.

The crisis has exposed some clear fault lines – inconsistencies in regulatory systems across countries and clear conflicts of interests. Remember, supervisory authorities instinctively gaze inwards, focusing on the health of domestic financial institutions and protecting domestic customers. A number of conflicts come to mind. For example, when you care about domestic taxpayers, it is hard to agree on the distribution of crisis resolution costs. And during bad times, every jurisdiction seeks to hoard as much capital and liquidity as possible, and to minimize risk.

So how do we improve coordination? I think a first step, an essential step, would be to focus more explicitly on global systemic risks. This mandate goes beyond financial supervisors, encompassing central banks and even governments. But we need to go further. We need an agreed framework of cooperation for dealing with cross-border firms that would address conflicts of interest – this would include harmonizing national legislation where necessary. I do not intend to discuss this in great detail, and will merely spell out some general principles. I think there are four essential areas: coordination of regulations, coordination of resolution tools, coordination in depositor and in-

vestor protection, and enhanced information sharing.

First, the coordination of regulations. One of the lessons of the crisis is that we must avoid regulatory arbitrage. Key aspects of prudential regulations must be applied consistently across countries and across financial activities. This is especially important today, as the road to a safer future involves strengthened financial regulation and supervision, not only of cross-border institutions but also of cross-border markets. This will only work if all countries sign on and take ownership of the initiative, and resist the temptation to offer loopholes.

Second, coordination of resolution tools. The framework needs to lay down common criteria for triggering early action when a firm gets into trouble. Strategies can differ across countries – the key is to get the best possible resolution strategy without resorting to lengthy court procedures.

Third, coordination in depositor and investor protection. The framework should bring some consistency to the amount of protection given to depositors and investors, and should feature explicit coordination principles.

Fourth, enhanced information sharing. Home and host country supervisors must be granted clear legal obligations and powers to share information among themselves, and also with local counterparts, and leave open the possibility of joint inspections.

How would such a framework be made operational? And who would oversee and enforce it? I think that institutions with expertise in the field – including the Financial Stability Board and the Basel Committee – will need to play a leading role. The IMF is certainly part of the process, even if we do not claim leadership. Our main role involves monitoring the implementation of the agreed framework through our surveillance process. We would verify that the framework has been translated into day-to-day practices and check whether it is followed when a crisis occurs.

We also have a broader role. Go back to a key underlying rationale for better coordination in crisis management – giving policymakers the tools to address systemic risks. This overlaps with the mandate of the IMF. Going forward, we intend to focus our surveillance on systemic risks from all quarters, better integrating the macroeconomic and financial sector work, and better monitoring policy spillovers and cross-country linkages, including linkages between markets and between institutions. We are developing, in collaboration with the Financial Stability Board, a vulnerability exercise covering both advanced and emerging market countries. These new early warnings must be tough, and not shy away from "naming and shaming" where appropriate.

As an example of these issues, consider the case of eastern Europe. With

heavy reliance on foreign currency-denominated debt, the reduction in capital flows puts pressure on balance sheets and economic activity in this region. In turn, this pressure gets transmitted back to western Europe, especially if the country's banks have sizeable subsidiaries in the east. In this way, the adverse feedback loop is perpetuated.

Conclusion

Let me briefly sum up. I argued that the degree of macroeconomic policy cooperation displayed during this crisis was impressive. On the whole, countries did the right thing, and they did it together. World leaders embraced multilateralism, and are reaping the rewards. Vehicles like the G-20 were used to coordinate policies and deliver a unified message. This stands in stark contrast to the experience of the Great Depression, and is – in my view – one of the main reasons why we will almost certainly avoid a Great Depression scenario this time around – even if we are experiencing something we may call the Great Recession. I must also say that the IMF played a key role in signaling what should be done, and we were ahead of the curve in pinpointing the policy responses that have since entered conventional wisdom.

Of course, I also argued that the record is less favorable with cross-border financial regulation, and much remains to be done. I won't downplay the challenges. It is one thing to give more resources to the IMF, or coordinate liquidity provision or fiscal stimulus among countries, but it is quite another to change domestic legislation in line with international agreements.

I want to make one final point, a critical point. It would be wrong to pat ourselves on the back at this point and become complacent. This crisis is not yet over, and there will, in all likelihood, be further tests ahead. We should not forget that countries also need credible exit strategies from the policies put in place during the crisis. They need firm plans to wind down liquidity and return to predominantly private sector-led financial intermediation. With fiscal policy, there is a time to sow and a time to reap, and loose policies today must go hand-in-hand with tight policies tomorrow. Complacency on this front will only lay the groundwork for serious fiscal solvency problems down the road. These exit strategies will also entail coordination – perhaps even greater coordination because the choices become more politically difficult. The big challenges lie ahead. Let's not lose the momentum.

Thank you.

Vortragende – Speakers

Karl Aiginger

Karl Aiginger, born in 1948, has been Director of the Austrian Institute of Economic Research (WIFO) since March 2005. He is a Professor of economics at the University of Linz and he held a position of a visiting Professor at Stanford University (1982 and 2002); the Massachusetts Institute of Technology (MIT, 1991); and the University of California Los Angeles (UCLA, 1997). He has contributed to the Austrian Advisory Council for Economic and Social Affairs and the Reform Dialogue of the Austrian Government. He is a lead manager and contributor to the European Competitiveness Reports since 1998. He is the editor of the Journal of Industry, Competition and Trade (JICT, jointly with André Sapir). Key areas of research include industrial economics, industrial policy and competitiveness.

Markus J. Beyrer

Markus J. Beyrer has been Secretary General of the Federation of Austrian Industries since August 2004. After his occupation as expert for European and International Affairs in the Department for Environmental Policy in the Austrian Federal Economic Chamber (1996–1999), he became Director of the Economic Policy Department of the Austrian Federal Economic Chamber in 2002. From 1999 to 2002, he was working for the former Federal Chancellor Wolfgang Schüssel (Vice Chancellor) of Austria as senior economic advisor. Markus J. Beyrer also participated in a Concours at the European Commission (successful candidate) and he was employed as Attaché for Industrial and Commercial Affairs at the Permanent Representation of Austria to the European Union from 1994 to 1996. In spring 1994, he made a stage in the European Commission, Directorate General XI (Environment). Mr. Beyrer was a member of the EU-Expert-Team („EU-Cadett") of the Department for European Integration- and Trade Policy in the Austrian Federal Economic Chamber from 1992 to 1994. Markus J. Beyrer studied law and commercial sciences at the University of Vienna and the Vienna University of Economics and Business Administration; he completed a postgraduate master course for European Law – Euro-Jus– at the Danube University Krems.

Wolfgang Duchatczek

Wolfgang Duchatczek has been serving as Vice Governor of the Oesterreichische Nationalbank (OeNB) since 2003. He joined the OeNB in 1976 and the Office of the Governor in 1978. He was appointed Chief of the Office of the Governor in 1982 and Deputy Executive Director of the Foreign Research Department in 1987. In addition, he served as Representative of the OeNB on the EC Integration Committee of the Austrian Federal Government. Mr. Duchatczek was appointed Director of the Area International Relations of the OeNB in 1992 and represented the OeNB during Austria's EU accession negotiations. He was nominated Chairman of the European Com-

mission's Committee on Monetary, Financial and Balance of Payments Statistics (CMFB) and served as the OeNB's Second Alternate on the Committee of Alternates of the European Monetary Institute (EMI). In 1997, he was appointed to the OeNB's Board of Executive Directors as Deputy Chief Executive Director of the Liquidity and Portfolio Management and Internal Services Department, and in 1998 he joined the OeNB's Governing Board as Executive Director of the Money, Payment Systems and Information Technology Department. Mr. Duchatczek holds a doctorate in economics and social sciences and has been awarded the Grand Decoration of Honor in Gold for Services to the Republic of Austria.

Helmut Ettl

Helmut Ettl was born on August 23, 1965 in Linz, where he also attended a business administration college (HAK) and then studied economics at the Johannes Kepler University in Linz. After completing his alternative service, he worked in various positions for the city of Linz child-welfare services. In 1995, he moved to Vienna and joined the Foreign Research Division of the Oesterreichische Nationalbank (OeNB), his priority area being the economic and monetary union. He became the assistant of Gertrude Tumpel-Gugerell in 1999, who was then the member of the Governing Board in charge of banking supervision. In 2001, he was appointed deputy head of the Banking Analysis and Inspections Division and became its head in 2003. The Federal President appointed Helmut Ettl as new member of FMA Executive Board of the Financial Market Authority FMA for a term of office of five years.

Josef Falkinger

Josef Falkinger is Professor of Public Finance and Macroeconomics at the University of Zurich. He obtained his doctorate in technical mathematics from the University of Linz in 1979 and his doctorate in economics in 1982 (also University of Linz). He was economist at the Chamber of Commerce, 1979–1982, and then at the University of Linz, as Assistant Professor and Lecturer from 1982 to 1990. He has worked and taught at the University of Graz, as Professor of Public Economics from 1991 to 1994, and at the University of Regensburg, as Professor of Industrial Economics and Foreign Trade Theory, 1990 and from 1995 to 2000. His research interests include macroeconomics – in particular employment, distribution and growth – and public goods. His work has been published in the Journal of Public Economics, European Economic Review, Journal of the Japanese and International Economies, Research in Labor Economics, American Economic Review, among other journals. His book on "A Theory of Employment in Firms. Macroeconomic Equilibrium and Internal Organization of Work" appeared in 2002.

Werner Faymann

Werner Faymann (born May 1960) is the Federal Chancellor of the Republic of Austria. He started his political ca-

reer as provincial chairman of the Socialist Youth Vienna in 1985. In the same year he started to work as consultant for Zentralsparkasse (now Bank Austria). Between 1985 and 1994, he was a Member of the Viennese state parliament and the municipal council. He became director and provincial chairman of the Viennese Tenants' counseling in 1988. In 1994, Werner Faymann was appointed executive city councilor for housing, housing construction and urban renewal, president of the Viennese Fund for Provision of Property and Urban Renewal and Vice President of the Viennese Business Agency. In 2007, Werner Faymann assumed office of the Federal Minister for Transport, Innovation and Technology. In June 2008, Mr. Faymann was elected chairman of the Social Democratic Party of Austria (SPÖ).

Bernhard Felderer

Bernhard Felderer (born in 1941) has been the Director of the Institute for Advanced Studies (IHS) in Vienna, Austria, since 1991 and Professor of economics at the University of Cologne, Germany, since 1995. He studied law and economics at the University of Vienna, where he received his doctoral degree in 1964. Following his studies in economics at the Faculté de Droit et Sciences Economiques of the University of Paris, he worked one year as a research assistant of Professor Fritz Machlup at Princeton University, New York, and later on lectured as a visiting professor at the University of North Carolina, Chapel Hill, U.S.A. After serving six years as an assistant professor at the University of Karlsruhe, Germany, he started to lecture as a professor at the University of Cologne in 1974. In 1987, he was appointed Director of the Economics Seminar at the Faculty of Economics and Social Sciences at the University of Cologne, a position he held until 1990. In 1977, he received a six-month appointment from the Soviet Academy of Sciences for consulting and teaching, mainly in Novosibirsk and Moscow. He serves on the General Council of the Oesterreichische Nationalbank and on the Austrian Government Debt Committee and is managing editor of the German Economic Review (GER) and associate editor of Empirical Economics. His main fields of interest are macroeconomic theory and policy, population economics and public finance. In addition to numerous other publications, he is the co-author of "Makroökonomik und Neue Makroökonomik" (with St. Homburg), which is the largest-selling textbook in Germany and Austria since the mid-eighties and has been translated into four other languages.

Erich Foglar

Erich Foglar is the current President of the Austrian Trade Union Federation. He started working as a toolmaker and became a member of the works council in 1979, with exemption from work duties from 1982 to 1987. In 1985, he accepted office of deputy chairman of the works council for manual workers. Between 1984 and 1987, he was engaged as training official for the re-

gional management Vienna. In the following years Erich Foglar assumed various responsibilities in the Metalworkers' Union (political secretary, deputy general secretary and from 1992 to 2006 general secretary). In spring 2006, he accepted office of the Executive Secretary of the Austrian Trade Union, taking charge of finances. Already in May 2006, he took over the occupation of General Secretary of the Trade Union for Metal, Textile and Foodworkers. In December 2008, he accepted office of Acting President of the Austrian Trade Union Federation, to be confirmed in the regular election on July 2, 2009.

Martin Hellwig

Martin Hellwig was appointed Director of the Max Planck Institute for Research on Collective Goods, Bonn, and Professor of Economics, University of Bonn (Courtesy Appointment) in 2004. He holds a diploma in economics from the University of Heidelberg (1970) and a doctorate in economics from the Massachusetts Institute of Technology

(1973). Following a postdoctoral year at Stanford University, he spent three years (1974–77) as assistant professor of economics at Princeton University, ten years as associate professor (1977–79) and professor of economics at the University of Bonn (1979–87), and another nine years at the University of Basle, Switzerland, before joining the University of Mannheim in 1996. He has held visiting positions at the Université Catholique de Louvain, the London School of Economics, Hebrew University, Jerusalem, and Harvard University. Professor Hellwig is a Member of the Economic Advisory Group on Competition Policy of the European Commission, DG Comp, and of the Scientific Advisory Committee of the German Ministry of Economic Affairs. He is also a former President of the European Economic Association and of the Verein für Sozialpolitik (German Economic Association), an Honorary Member of the American Economic Association, a Fellow of the Econometric Society and former co-editor of Econometrica, and a former chairman of the German Monopolies Commission. His research interests involve public economics, network industries and competition policy, financial markets and institutions, corporate governance, foundations of monetary theory and macroeconomics and anything else that looks intriguing.

Andreas Ittner

Andreas Ittner is a Member of the Governing Board of the Oesterreichische Nationalbank (OeNB). He studied economics and social sciences at the Vienna University of Economics and Business Administration between 1976 and 1980. Mr. Ittner started his professional career with the Ittner retail business in Vienna in 1978. In 1983, he joined the OeNB and began to work in the Banking Analysis and Credit Supervision Office. In 1997, he became head of the Secretariat for the President in the OeNB and in 1987, Andreas Ittner was appointed Director of the Financial Stability and Bank Inspections Department of the OeNB. Mr. Ittner is among

other engagements an Acting Member of the Banking Supervision Committee of the ESCB, Vice President of the Centre for Secure Information Technology, Member of the Supervisory Board of the Austrian Financial Market Authority as well as Member of the Financial Market Committee established under the Austrian Banking Supervision Act.

Monika Kircher-Kohl

Monika Kircher-Kohl (born in 1957) studied economics at the Vienna University of Economics and Business and in Mexico City. In 1981, Ms. Kircher-Kohl became Managing Director of the regional department of the Austrian Information Service for Growth Policy in Carinthia. Before being elected Vice Mayor of the city of Villach, she lectured at the University of Klagenfurt and worked as a freelance consultant. In 2001, Monika Kircher-Kohl joined Infinion Technologies Austria AG as a Member of the Board, responsible for Finance, Research & Development and Human Rescources. She took over office as Managing Director of the plant in Villach and became Chief Ececutive Officer of Infineon Technologies Austria AG for Finance, Human Resources and IT in 2007.

Michael A. Landesmann

Michael A. Landesmann is Scientific Director of The Vienna Institute for International Economic Studies (wiiw) and Professor of economics at the Johannes Kepler University Linz, Austria where he is also department head of economic theory and quantitative economics. His research focuses on international economics, economic growth and structural change, industrial economics and labor markets. Apart from his participation in and co-ordination of a large number of international research projects (European Commission, World Bank, ILO, UNCTAD, etc.), Michael Landesmann is a member of the Coordinating Committee of the European Trade Study Group (ETSG), the main European academic forum on international economics. In addition,

he was a member of the Group Economic Analysis, the Group of Economic Policy Advisors under the chairmanship of former EU Commission President Romano Prodi. Michael Landesmann completed his doctorate in economics at Oxford University (Balliol College) and was Fellow and Lecturer in economics, Jesus College, Cambridge and Senior Research Officer at the Department of Applied Economics, University of Cambridge. He is Founding Managing Editor of *Structural Change and Economic Dynamics,* North Holland and a member of the editorial boards of a range of academic journals. He was Schumpeter Research Professor at Harvard University (USA) and held Visiting Professorships at the Graduate School of International Economics and Finance, Brandeis University (USA), University of Basel (Switzerland), Central European University and CERGE-EI (Prague; Czech Republic), Bombay University (India), Universities of Bologna, Modena and Padova (Italy), Osaka University and Osaka City University (Japan).

Axel Leijonhufvud

Dr. Leijonhufvud was born in Stockholm, Sweden and obtained his bachelor's degree at the University of Lund. After coming to the USA in 1960, he earned an M.A. from the University of Pittsburgh and his Ph. D. from North-

western University. He came to the University of California at Los Angeles in 1964 and was named Full Professor in 1971. He has served as Chairman of the Economics Department, most recently in 1990–1992. In 1991, he started the Center for Computable Economics at UCLA and remained its Director until 1997. In 1995, he was appointed Professor of Monetary Theory and Policy at the University of Trento, Italy. Professor Leijonhufvud has honorary degrees from the University of Lund, Sweden, and the University of Nice, Sophia-Antipolis, in France. He has been a Fellow of the Institute of Advanced Studies in Princeton and at the Centers for Advanced Studies in Vienna and in Jerusalem and he is an Overseas Fellow of Churchill College, Cambridge. He has lectured widely and has been a visiting professor at a number of universities including the European University Institute, Florence, Stockholm School of Economics, University of Konstanz, University of Strasbourg, Nihon University in Tokyo, and Instituto Torcuato di Tella in Buenos Aires. He has testified before Congress on issues of banking and monetary policy and has been an economic advisor to the President of Kazakhstan as well as a consultant to Russian regional governments. He has been included in *100 Great Economists since Keynes* (M. Blaug, editor), in the International Who's Who, Who's Who in America, etc. Dr. Leijonhufvud's book, On Keynesian Economics and the Economics of Keynes: A Study in Monetary Economics (Oxford, 1968) was an important step in the development of disequilibrium economics and has been translated into German, Italian, Spanish, Japanese, Serbo-Croatian and Chinese.

Rainer Münz

Rainer Münz is Head of Research at Erste Bank in Vienna and Senior Fellow at the Hamburg Institute of International Economics (HWWI; Migration Research Group). He is an expert on population and migration, including labor migration and migration policy. He studied at Vienna University, where he earned his Ph. D. in 1978. Until 1992, he was Director of the Institute of Demography at the Austrian Academy of Science. Between 1992 and 2003, he was Head of the Department of Demography at Humboldt University, Berlin. He was visiting professor at the Universities of Bamberg (1986), UC Berkeley (1986, 1989, 1997–98), Frankfurt (1988), Klagenfurt (1996, 1998), Vienna (2001–02) and Zurich (1992). He also was Senior Research Fellow at the Department of Mathematics of Finance, Technical University, Vienna (2001–2002). Since 2002, he is External Fellow of the Center for Comparative Immigration Studies, University of California at San Diego. Rainer Münz is a member of several boards and advi-

sory boards; among them: International Organization for Migration (IOM, Geneva), Center for Migration, Integration and Citizenship at Oxford University (COMPAS, Oxford, UK), International Metropolis Project (Ottawa – Amsterdam), Association of German Pension Insurers (VDR, Frankfurt-Berlin, Germany), Daimler-Benz Foundation (Ladenburg, Germany), SOT Accountants (Vienna-Graz-Munich), VBV Pension Insurance (Vienna), OBV-HTP Publishers (Vienna).

Ewald Nowotny

Ewald Nowotny is the Governor of the Oesterreichische Nationalbank (OeNB) and a Member of the Governing Council of the European Central Bank (ECB). Before taking on his current position in September 2008, Ewald Nowotny held a number of high-level positions in financial institutions. He was CEO of the Austrian BAWAG P.S.K. banking group from 2006 to 2007, served as Vice President and Member of the Executive Board of the European Investment Bank (EIB) in Luxembourg from 1999 to 2003 and, between 1971 and 1979, was first a Member and then President of the Governing Board of Österreichische Postsparkasse (P.S.K.). Moreover, from 1992 to 2008 Ewald Nowotny served as member of the supervisory board of several banks and corporations and was a member of the OeNB's General Council from 2007 to 2008. Ewald Nowotny was born in Vienna, Austria, in 1944. He studied law and government sciences at the University of Vienna and economics at the Institute of Advanced Studies in Vienna. In 1967, he received his doctorate in law from the University of Vienna. After working as assistant to Professor Kurt W. Rothschild at the Economics Department of the University of Linz, Austria, from 1968 to 1973, Ewald Nowotny received his postdoctoral qualification (Habilitation) in General Economics and Public Economics in 1973 and subsequently held research tenures and professorships at Harvard University, Technische Universität Darmstadt, Germany, and the University of Linz, Austria. From 1981 to 2008, Ewald Nowotny served as Full Professor at the Vienna University of Economics and Business, where he also held the position of Vice Rector from 2003 to 2004. In 2008, Ewald Nowotny received a honorary doctorate in Social and Economic Sciences from the Alpen-Adria Universität Klagenfurt, Austria. Ewald Nowotny has published numerous articles in refereed journals. He is also the author or coauthor of nine books; the fifth edition of his internationally renowned textbook "Der öffentliche Sektor – Einführung in die Finanzwissenschaft" was published in 2008. Ewald Nowotny was an elected Member of

the Austrian Parliament from 1979 to 1999 and served as chairman of the parliamentary Finance Committee from 1985 to 1999. Ewald Nowotny is married and has a son.

Lucas D. Papademos

Lucas D. Papademos has been the Vice President of the European Central

Bank since June 2002. He is also a Member of the Executive Board and of the Governing Council of the ECB. Previously, he was Governor of the Bank of Greece from 1994 to 2002, Deputy Governor from 1993 to 1994 and Economic Counsellor (Chief Econ-

omist) from 1985 to 1993. From 1975 to 1984, he was a professor of economics at Columbia University in New York. In 1980, he also held the position of Senior Economist at the Federal Reserve Bank of Boston. He was elected professor of economics at the University of Athens in 1988 (currently on leave) and a member of the Academy of Athens in 2006. Lucas Papademos was born in Athens in 1947. He received a B.S. in physics (1970), an M.S. in electrical engineering (1972) and a Ph. D. in economics (1977), all from the Massachusetts Institute of Technology. He has published numerous articles and essays in the fields of macroeconomic theory, the structure and functioning of financial markets, monetary analysis and policy as well as on subjects concerning the economy, financial stability and the conduct of economic policy in the European Union. His recent articles include: "The contribution of monetary policy to economic growth", in *Bank-Archiv Journal of Banking and Financial Research,* 2004; "Economic cycles and monetary policy" in *Monetary Policy, Economic Cycle and Financial Dynamics,* Paris: Banque de France, 2004; "Economic heterogeneity, convergence and monetary policy in an enlarged euro area" in the *Journal of Economic Asymmetries,* 2004; "Policy-making in EMU: strategies, rules and discretion", in *Economic Theory,* 2006; "Monitoring hedge funds: a financial stability perspective" in *Financial Stability Review No. 10 – Special Issue on Hedge Funds,* Paris: Banque de France, 2007; "The role of money in the conduct of monetary policy", in Reichlin, L. et al. (eds.) *"The role of money: money and monetary policy in the twenty-first century",* Frankfurt: ECB, forthcoming; "Europe's growth performance: fundamental determinants and the role of the financial sector" in *"Perspectives on the Performance of the Continent's Economies",* Cambridge University Press, forthcoming.

Adam S. Posen

Adam S. Posen is a member of the Monetary Policy Committee of the Bank of England, by appointment of the UK Chancellor of the Exchequer, until September 2012. He is also senior fellow at the Peterson Institute for International Economics (PIIE) in Washington, where he has been working since 1997. His research focuses on macroeconomic policy and performance, European and Japanese political economy, central banking issues, and the resolution of financial crises. He is the author or editor of five books and numerous research articles, and received Ph. D. and his AB from Harvard University, where he was a National Science Foundation Graduate Fellow. He was previously a visiting scholar at central banks worldwide and has been a consultant to several US government agencies, the European Commission, the Japanese Ministry of Economy,

Trade, and Industry, the UK Cabinet Office, and to the International Monetary Fund on a variety of economic and foreign policy issues.

Walter Rothensteiner

Walter Rothensteiner has been Chief Executive Officer of Raiffeisen Zentralbank Österreich AG, Vienna since July 1995 and has been its Chairman of the Managing Board since June 1, 1995. Mr. Rothensteiner serves as a Member of the Managing Board at Raiffeisen Zentralbank Österreich AG. He serves as General Manager and Chairman of the Board of Executive Directors of Raiffeisen Zentralbank Österreich Aktiengesellschaft, Vienna. Mr. Rothensteiner has been Member of the Managing Board of Raiffeisenlandesbank Niederösterreich-Wien since 1975, AGRANA-Beteiligungs AG since 1995. He serves as Member of the Managing Board of Leipnik-Lundenburger Industrie AG. He has been Deputy Chairman of AGRANA-Beteiligungs AG since 1995. He served as Deputy Chairman of the Managing Board of RZB since June 1, 1995. Mr. Rothensteiner holds Economics and Business Administration Degrees and studied Commercial Science at the Vienna University of Economics and Business Administration.

Silvia Sgherri

Silvia Sgherri has been working as an economist at the International Monetary Fund since 2000. She has been promoted to senior economist this year. In addition, she did research at the the ECB in 2005 and and as a research fellow at De Nederlandsche Bank in 1999. Silvia Sgherri earned her Ph. D. in economics from the University of Warwick in 2000 and her Doctorate in economics and management from Sant'Anna School for Advanced Studies in 1998. Her research interests include macro-econometric modeling, applied macroeconomics, time-series econometrics.

Dennis J. Snower

Dennis J. Snower is President of the Kiel Institute for World Economics (since 2004). He obtained his doctorate in Economics from Princeton University in 1975 for his dissertation on "Dynamic Forces of Advanced, Capitalist Economies." He was an Assistant Professor at the University of Maryland, the Institute of Advanced Studies, Vienna, a lecturer at the University of London, and Full Professor of Economics at Birkbeck College, University of London (1989–2004). He has worked and taught at Columbia University, the University of Stockholm, the University of Jerusalem, the International Monetary Fund, the European University Institute, Dartmouth College, and elsewhere. Among others he received grants and awards from the Social Science Research Council, U.K., from the Nuffield Foundation, and from ESRC. Since 1993 he is a Fellow of the Royal

Society of Arts. In April 1998, he joined IZA as a research fellow and acted as IZA Program Director for the "Welfare State and Labor Market" until 2004. Dennis Snower published in Journals such as the American Eco-

nomic Review, The Journal of Political Economy, European Economic Review, Oxford Economic Papers, and the Economic Journal. His current research interests include issues in labor economics such as wage bargaining, the natural rate of unemployment, employment policies, and the economics of imperfect information.

Dominique Strauss-Kahn

Dominique Strauss-Kahn assumed office as the tenth Managing Director of the International Monetary Fund on November 1, 2007. Upon being selected by the IMF's Board of Executive Directors, Mr. Strauss-Kahn indicated that he will press ahead with reform of the 186 member country institution that helps oversee the global economy. Prior to taking up his position at the IMF, Mr. Strauss-Kahn was a member of the French National Assembly and Professor of Economics at the Institut d'Etudes Politiques de Paris. From

2001 to 2007, he was reelected three times to the National Assembly, and in 2006, he ran for the Socialist Party's nomination for the French presidential election. In 2000 and 2001, he taught economics at the Institut d'Etudes Politiques de Paris and was named visiting professor at Stanford University. He was also a personal advisor to the Secretary General of the OECD. Earlier, Mr. Strauss-Kahn served as Minister of Economy, Finance and Industry of France from June 1997 to November 1999. In this capacity, he managed the launch of the euro. He also represented France on the Board of Governors of a number of international financial institutions, including the IMF. Between 1993 and 1997, he was in the private sector as a corporate lawyer. From 1991 to 1993, Mr. Strauss-Kahn served as Minister of Industry and International Trade, during which time he participated in the Uruguay Round of trade negotiations. Mr. Strauss-Kahn began his career as assistant professor, then Professor of economics at the University of Paris where he was tenured in 1978. He was then appointed Deputy Commissioner of the Economic Planning Agency (1981–1986). He was elected Deputy (Member of Parliament) to the National Assembly (1986), where he chaired the Finance Commission from 1988 to 1991. Mr. Strauss-Kahn holds a Ph. D. in economics from the University of Paris. He also graduated in law, in business administration, in political studies, and in statistics. As an academic, his research fields include household saving behavior, public finance, and social policy.

Javier Suarez

Javier Suarez is Professor of banking and finance at CEMFI, Madrid, and a research member of the Centre for Economic Policy Research (CEPR), the European Corporate Governance Institute (ECGI), and the Financial Markets Group of the London School of Economics (LSE). He earned a Ph. D. in Economics at Universidad Carlos III de Madrid in 1994. After a postdoctoral stay in Harvard University, he became a lecturer at the London School of Economics. In 1996, he joined the faculty

of the Center for Economic and Financial Studies (CEMFI) in Madrid, a research foundation of the Bank of Spain, where he became a tenured Associate Professor in 2001 and a Full Professor in 2004. His research and teaching activities cover mainly the areas of corporate finance and banking, with a special focus on applications of contract theory and the analysis of bank regulation, venture capital, and the linkages between macroeconomics and finance. His most recent work focuses on issues such as the procyclical effects of capital requirements, the macroeconomics of money market freezes, and the regulation of banks' liquidity. He has published in top economics and finance journals, including Journal of Political Economy, Journal of Finance, Review of Economic Studies, Journal of Economic Theory, and Review of Financial Studies. He is an associate editor of the Review of Finance since 2004 and the Journal of the European Economic Association since 2009. In 2006 he won the Fundacion Banco Herrero Prize for Spanish researchers younger than 40 years old in the fields of economics, business, and social research. Since the start of the financial crisis, he has got involved in numerous initiatives bringing together academics and policy makers for the discussion of key challenges for policies regarding banks, their regulation, and the wider implications for the economy.

Herbert Tumpel

Herbert Tumpel, born in 1948, studied economics at the University of Vienna and obtained his master's degree in 1973. Subsequently, he started his professional career at the Department of Economics of the Austrian Trade Union Federation (ÖGB). In 1983, he became head of the Department of Economics of the ÖGB. From 1987 to 1997, he served as executive secretary for economic and social policy and social affairs of the ÖGB. Since 1997, Herbert Tumpel has been in the position of President of the Austrian Federal Chamber of Labor.

Arnout H. E. M. Wellink

Mr. Wellink has been President of De Nederlandsche Bank (DNB) since July 1, 1997. Since January 1999, Mr. Wellink has sat on the Governing Council of the European Central Bank. Also, he has chaired the Basel Committee for Banking Supervision since July 2006. Since 1997, Dr. Wellink has sat on the Board of Directors of the Bank for International Settlement, which he chaired from 2002 until 2006. Mr. Wellink is a member of the Group of Ten Governors, the committee of central bank governors of the G10 countries, and a Governor of the International Monetary Fund. Nout Wellink's many secondary functions include the following. He is Chairman of the Board of Supervisors of the Netherlands Open Air Museum, Treasurer of the Supervisory Board of the Royal Picture Gallery Mauritshuis and member of the Supervisory Board of the Dutch Central Genealogy Bureau. He has been awarded a Knighthood in the Order of the Netherlands Lion. In 1982, Mr. Wellink be-

came an Executive Director of the DNB. Between 1970 and 1982, he held several posts in the Ministry of Finance, starting on the economic staff, from 1975 as the Director General of Financial and Economic Policy and later as Treasurer General. From 1965 until 1970, Mr Wellink worked as an assistant, later staff member, in the economics department of Leiden University. After a study in Dutch law at the same university (1961–1968), Wellink obtained a doctor's degree in economics at the Rotterdam Erasmus University. He completed his second-

ary education (science and grammar stream) in 1961. He was born on 27 August 1943 at Bredevoort.

Peter Zöllner

Peter Zöllner studied International Economics at the Vienna University of Economics and Business Administration and holds a doctoral degree (dissertation on external monetary policy in Austria after 1945). Peter Zöllner joined the Oesterreichische Nationalbank (OeNB) in 1980, working in the Banking Department (Foreign Exchange Transaction Division, Market Analysis Division, Dealing Room). Between 1985 and 1987, Peter Zöllner lectured money and currency theory at the Vienna University of Economics and Business Administration. The OeNB dispatched Mr. Zöllner as Representative to New York, and in the position of Consul for Financial Affairs of the Republic of Austria in New York. In 1991, he became economic policy adviser fo the Austrian Federal Chancellor Vranitzky. After his appointment as Director of the Treasury Department of the OeNB in 1996 he returned to the OeNB to become Member of the Governing Board and Executive Director of the Financial Market Operations, Equity Interest and Internal Services Executive Directorate in 1998. Peter Zöllner holds various secondary functions as e.g. chairman of the Supervisory Board of IG Immobilien Management GmbH, chairman of the Supervisory Board of BLM Betriebs-Liegenschafts-Management GmbH, deputy chairman of the Supervisory Board of Oesterreichische Banknoten- und Sicherheitsdruck GmbH, deputy, chairman of the Supervisory Board of Münze Österreich AG, deputy chairman of the Advisory Board of Austria Card Plastikkarten und Ausweissysteme GmbH, member of the Supervisory Board of Casinos Austria AG.

Die Volkswirtschaftliche Tagung der OeNB stellt eine Plattform für den internationalen Meinungs- und Informationsaustausch zu währungs-, wirtschafts- und finanzmarktpolitischen Fragen zwischen Zentralbanken, wirtschaftspolitischen Entscheidungsträgern, Finanzmarktvertretern und der universitären Forschung dar. Der Konferenzband enthält alle Beiträge der Tagung.

The Economics Conference hosted by the OeNB is an international platform for exchanging views on monetary and economic policy as well as financial market issues. It convenes central bank representatives, economic policy decision makers, financial market players, academics and researchers. The conference proceedings comprise all papers.

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