OECD Economic Surveys
HUNGARY

MARCH 2012

OECD

OECD Economic Surveys: Hungary 2012

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Please cite this publication as:
OECD (2012), *OECD Economic Surveys: Hungary 2012*, OECD Publishing.
http://dx.doi.org/10.1787/9789264127272-en

ISBN 978-92-64-12726-5 (print)
ISBN 978-92-64-12727-2 (PDF)

Series: OECD Economic Surveys
ISSN 0376-6438 (print)
ISSN 1609-7513 (online)

OECD Economic Surveys: Hungary
ISSN 1995-3461 (print)
ISSN 1999-0529 (online)

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Photo credit: Cover © Image Source – Fotolia.com.

Corrigenda to OECD publications may be found on line at: *www.oecd.org/publishing/corrigenda*.

Table of contents

Boxes

Tables

Figures

This Survey *is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.*

The economic situation and policies of Hungary were reviewed by the Committee on 17 January 2012. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 2 February 2012.

The Secretariat's draft report was prepared for the Committee by Rafał Kierzenkowski, Mehmet Eris and Olena Havrylchyk under the supervision of Pierre Beynet. Statistical assistance was provided by Desney Erb. The Survey *also benefited from external consultancy work.*

The previous Survey *of Hungary was issued in February 2010.*

BASIC STATISTICS OF HUNGARY, 2010

LAND

Total area (1 000 km^2):	93.0
Agriculture (%)	62.2
Forest (%)	20.4

Major cities (thousand inhabitants):	
Budapest	1 733.7
Debrecen	208.0
Szeged	170.3

PEOPLE

Population:	
Thousands	10 000
Increase 2005-10 (annual rate, %)	–0.2
Number of inhabitants per km^2	107

Total labour force (thousands)	4 231
Employment (% of total):	
Agriculture, forestry and fishing	4.5
Industry and construction	30.7
Services	64.8

PRODUCTION

Gross domestic product:	
In billion HUF	26 891
Per head (thousand USD)	13.0

Gross fixed capital investment:	
In % of GDP	17.7
Per head (thousand USD)	2.3

GOVERNMENT

Public consumption (% of GDP)	21.7
General government (% of GDP):	
Current expenditure	47.9
Current revenue	42.3
Gross debt, Maastricht definition	80.9

Number of seats in Parliament:	386
Fidesz, Hungarian Civic Union and KDNP	262
Hungarian Socialist Party (MSZP)	59
Movement for a Better Hungary (Jobbik)	47
Politics can be different (LMP)	16
Other	2
Last general elections: April 2010	

FOREIGN TRADE

Exports of goods and services (% of GDP)	86.0
Main commodity exports (% of total):	
Machinery and transport equipment	60.2
Manufactured goods	27.6
Food, beverages and tobacco	6.9
Fuels, electric energy	2.8

Imports of goods and services (% of GDP)	79.5
Main commodity imports (% of total):	
Machinery and transport equipment	50.4
Manufactured goods	31.9
Fuels, electric energy	10.7
Food, beverages and tobacco	5.0

CURRENCY

Monetary unit: forint	

Annual average (2011):	
Forints per USD	200.6
Forints per EUR	275.5

Executive summary

Hungary's economy faces severe headwinds. *The global economic slowdown and heightened financial market stress have pushed an already fragile and highly indebted economy towards recession. But, controversial domestic policies have also contributed to uncertainty thereby hurting consumer, business and market confidence. Stabilising the economy is the first most pressing priority. Strengthening the credibility and predictability of domestic policies is essential to develop an environment which is conducive to growth and rising incomes. An agreement with multilateral organisations would help restore confidence and support needed fiscal consolidation. In doing so, it would lower the debt burden in foreign currency by stabilising the exchange rate. The second challenge is to put growth on a sound footing to allow a durable recovery. This requires reductions in households' debt without damaging banks to avoid a credit crunch. Finally, raising potential growth is of utmost importance: boosting labour force participation and health outcomes are two promising avenues.*

Credible fiscal consolidation and support for labour demand will help stabilise the economy. *Despite a relatively favourable fiscal position, a recent deterioration in the underlying balance calls for renewed efforts on top of measures adopted for 2012. A sustained fiscal consolidation should rely more on durably curbing spending by implementing permanent measures and structural reforms to boost growth, such as those outlined in the Széll Kálmán plan, and, if needed, by raising the least distortive taxes. As recent changes in the tax and benefit system have been highly regressive, minimising negative distributional impacts of consolidation is essential to ensure public acceptance and, thus, political sustainability. The credibility of the consolidation programme would be bolstered by providing the fiscal council with adequate resources to perform fiscal surveillance; by contrast, its excessive power to veto the budget should be removed as it could potentially lead to a fall of government. Avoiding cyclical unemployment becoming structural requires an overhaul of labour market policies with a stronger focus on active measures including high-quality training, but also better targeting of employment subsidies and correction over time of the very large increases in the minimum wage.*

Making the economy more robust to shocks and promoting a business-friendly environment will put growth on a sounder footing. *Hungary is excessively exposed to shifts in investors' confidence through its high foreign currency indebtedness. This applies to public debt, which should rely more on domestic financing in forints, and especially to households. Programmes to support household debt reduction should focus on distressed households, and ensure burden sharing between lenders, borrowers and the government. The mid-December 2011 agreement with banks is a welcome step in the right direction, but is not sufficiently targeted to distressed borrowers. To forestall deeper credit rationing, bank recapitalisation, if necessary, should be done by raising the level of capital so as not to downsize loan portfolios, and the bank levy should be reduced and redesigned. More checks and balances would also lead to a more predictable and thus business-friendly environment. In particular, the full powers of the Constitutional Court in economic matters should not be conditional on the level of the debt-to-GDP ratio, and effective independence of the central bank should be guaranteed, in line with Hungary's international obligations.*

Raising labour force participation and improving health can boost growth. *Structural measures are needed to increase labour supply of under-represented groups. Participation of women would benefit from developing flexible work arrangements and making it easier to combine work and families. Better attuning the education system to labour market needs would ease the integration of youth and the Roma. Finally, reforming early retirement and lifelong learning would raise incentives to work at older ages. The limited effectiveness of the health system creates opportunities to improve health outcomes without straining public finances. This could be achieved by reallocating resources from inpatient services to outpatient services, prevention and health promotion programmes, and long-term care, and by enhancing health workforce management. Access to health care would be enhanced by discouraging informal payments.*

Assessment and recommendations

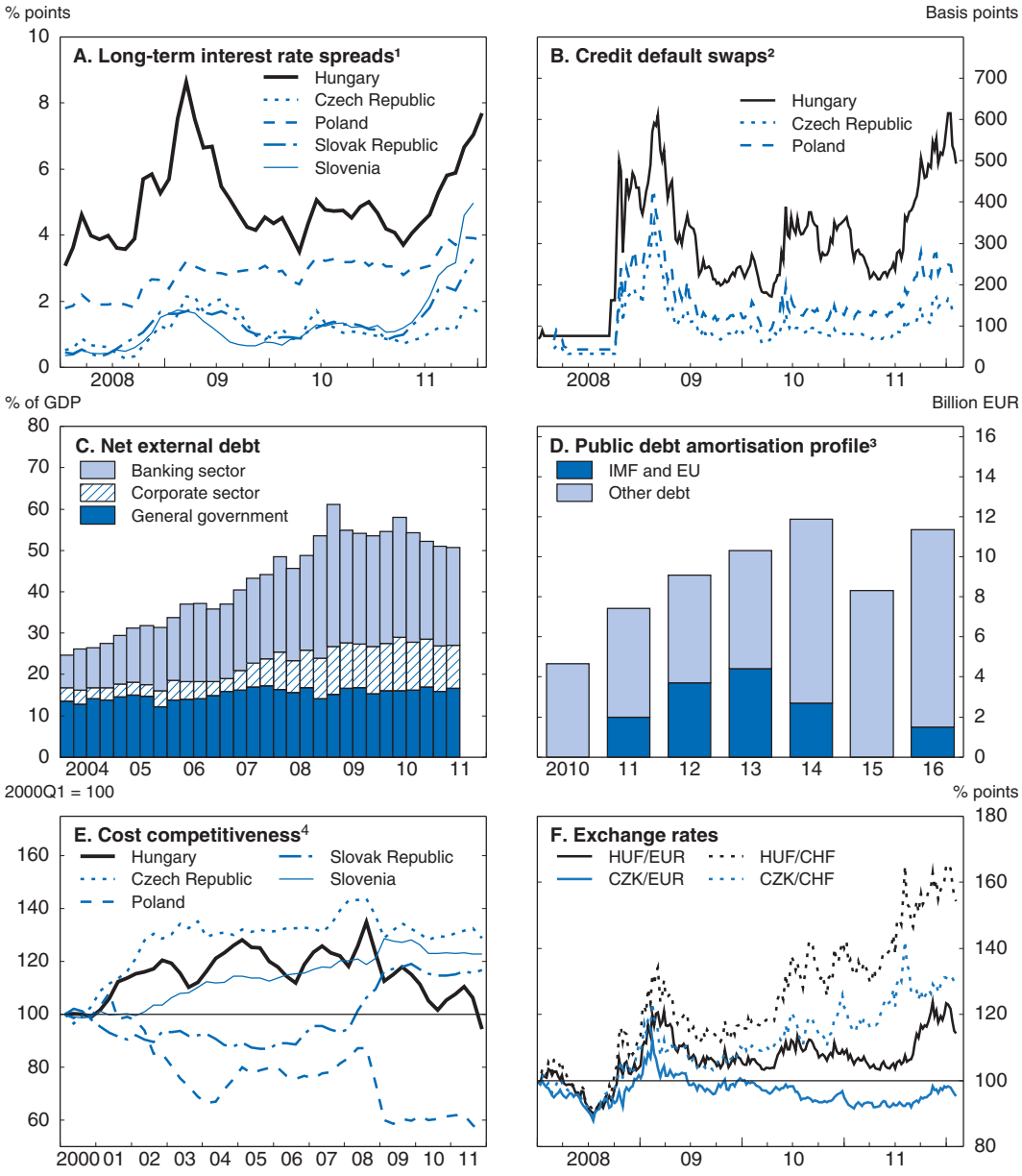
Hungary's economy is facing renewed market stress

Hungary is confronted with heightened tensions in financial markets. Long-term interest and credit default swap rates on public debt have risen significantly since spring 2011 (Figure 1, Panels A and B). The sovereign rating was downgraded to non-investment grade and several debt auctions failed or partially failed in late 2011, which creates high uncertainty ahead of significant public debt rollover needs in 2012 and 2013 (Figure 1, Panel D). In addition, the currency has depreciated sharply, increasing the debt burden in foreign currency (Figure 1, Panels F and C). To help stabilise the markets, the government requested financial precautionary assistance from the European Union (EU) and International Monetary Fund (IMF), and the central bank raised its policy rate by 50 basis points twice in November and December 2011 to 7%.

The combination of global economic slowdown and heightened market stress is hitting an already fragile economy. Solid cost competitiveness (Figure 1, Panel E) and contained relative export prices have been behind large gains in market shares and Hungary's current account surplus, but have not prevented a steep slowdown in export growth. Private-sector reduction of debt is depressing domestic demand. The introduction and design of the flat tax in 2011 increased average net incomes, but other direct tax measures led to a loss in the incomes of households at the lower-end of the wage distribution, who are those with the highest propensity to consume and therefore also those most affected by the increased value added tax (VAT) in 2012. Despite cuts in the corporate income tax for small and medium-sized enterprises and some flagship projects in the automobile industry which boosted manufacturing investment, overall investment has remained subdued. This reflects in part depressed construction activity as well as economic uncertainty, compounded by the levy of "crisis taxes" imposed on various sectors. The introduction of a sizeable bank tax contributed to some credit rationing. Also, to compensate households who lost income following the removal of the employment tax credit, the government raised minimum wages and gave incentives to firms to increase wages by excluding from public tenders and subsidies those failing to comply with the tripartite agreement on wage increases.

Overall, the economy is projected to be in recession in early 2012, with a weak recovery starting in the latter half of the year as confidence returns somewhat and global financial and economic conditions improve (Table 1). The unemployment rate is projected to increase due to the economic slowdown, compounded by a large hike by 19% in the minimum wage in 2012, while labour force supply may increase along with cuts in the generosity of social benefits. This projection is consistent with a "muddling through" on the global stage, but has significant downside risks with a substantial possibility of materialising. In the medium term, prospects remain bleak without new policies to boost potential growth. A decrease by 25% in gross fixed investment since mid-2008 is reducing potential output from close to 3%

Figure 1. **Key indicators**



1. Ten-year government bond spreads relative to the German rate.
2. Five year rates; mid-rate spread between the entity and the relevant benchmark curve.
3. Based on *IMF Country Report*, No. 11/137 of June 2011.
4. Effective exchange rate based on relative unit labour costs in the manufacturing sector.

Source: OECD (2012), *OECD Economic Outlook: Statistics and Projections* (database), January; Datastream, Magyar Nemzeti Bank and International Monetary Fund.

StatLink http://dx.doi.org/10.1787/888932575636

in the pre-crisis period to below 1%. While labour productivity is projected to increase somewhat, rapid demographic ageing will hold growth to an estimated 1-1.5% in the coming years.

Table 1. **Short-term outlook**

	Current prices (billion HUF) 2008	Percentage change, volume 2005 prices[1]				
		2009	2010	2011	2012	2013
Real gross domestic product	**26 589**	**–6.6**	**1.2**	**1.5**	**–0.6**	**1.1**
Private consumption	14 380	–6.2	–2.2	–0.7	–2.0	–0.2
Government consumption	5 801	–0.7	–2.1	–0.3	–1.3	–0.2
Gross fixed capital formation	5 760	–11.0	–9.7	–6.7	–3.9	–0.2
Final domestic demand	25 940	–6.1	–3.7	–1.8	–2.2	–0.2
Stockbuilding[2]	528	–4.6	3.2	0.5	–0.1	0.0
Total domestic demand	26 468	–10.5	–0.5	–1.3	–2.4	–0.2
Exports of goods and services	21 677	–10.2	14.3	9.4	4.8	6.4
Imports of goods and services	21 557	–14.8	12.8	6.8	3.3	5.5
Net exports[2]	121	3.6	1.8	2.7	1.7	1.3
Memorandum items:						
GDP deflator	. .	3.9	3.0	2.0	4.0	2.4
Consumer price index	. .	4.2	4.9	3.9	4.9	2.9
Private consumption deflator	. .	3.7	4.2	3.4	4.6	2.7
Unemployment rate (% of labour force)	. .	10.1	11.2	11.0	11.9	11.8
General government financial balance[3]	. .	–4.5	–4.3	4.0	–3.4	–3.3
Gross government debt (Maastricht definition)[3]	. .	79.2	80.9	84.2	85.1	85.9
Current account balance[3]	. .	–0.2	1.1	1.9	1.4	1.2

1. Projections from 2011 onwards from OECD (2011), *OECD Economic Outlook*, No. 90.
2. Contribution to changes in real GDP (percentage of real GDP in previous year), actual amount in the first column.
3. As a percentage of GDP.

Source: OECD (2012), *OECD Economic Outlook: Statistics and Projections* (database), January.

Stabilising the economy and boosting potential growth

With heightened financial market pressures and activity falling, the first challenge is to stabilise the economy. Rapidly reaching an agreement with multilateral organisations for new financial assistance is a key first step to help restore investor confidence, stabilise the exchange rate and relieve some pressure on households, who are heavily indebted in foreign currency. By insuring against rollover risks and providing a stable market access, such an agreement would provide an environment allowing needed fiscal consolidation. Well designed structural consolidation measures that minimise economic costs and adverse distributional impacts are necessary. Credible fiscal adjustment will eventually open the way for a loosening of monetary policy.

The second main challenge is to restore growth through further structural reforms. In the short-term, a precondition for any durable recovery is reducing household exposure to foreign currency. As the excessive borrowing in foreign currency was a shared responsibility of lenders, borrowers and regulators, the burden of adjustment should fall on banks, households and the government. The mid-December 2011 agreement between the government and the banking sector was a welcome step towards fair burden sharing, but is not sufficiently targeted to distressed borrowers. In the medium term, raising potential growth will be fostered by a business-friendly environment with a level playing field and strong checks and balances to avoid unpredictable policies and uncertainty of contracts. This should stimulate investment and labour productivity but boosting drivers of potential employment growth, notably the growth in trend labour force participation, will be necessary as well. Reforming labour market and health policies could contribute significantly to this objective. The main assessment and recommendations on these issues are summarised below and analysed in more detail in the chapters of the *Survey*.

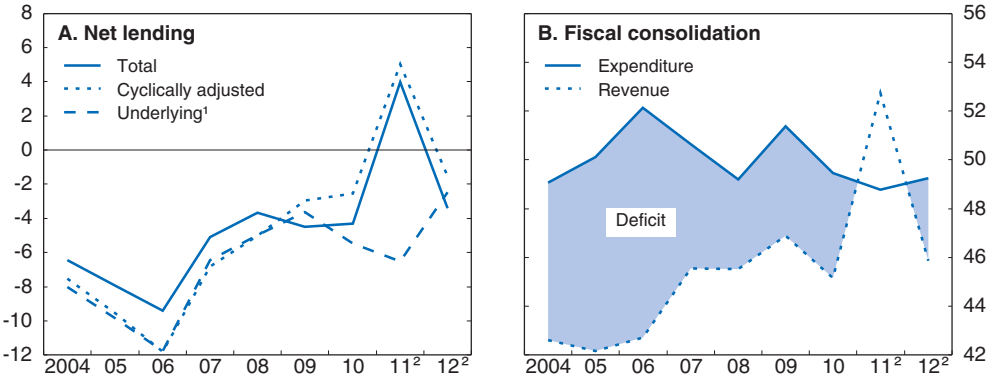
Short-term policies to restore confidence and head off the risk of a prolonged downturn

Resuming fiscal consolidation

After three years of sizeable fiscal consolidation from 2006 to 2009, some adjustment fatigue resurfaced as the underlying fiscal balance deteriorated in both 2010 and 2011, reversing earlier gains (Figure 2, Panel A). Cuts in labour and capital income taxes resulted in significant revenue losses that were initially offset through one-off measures, notably the assumption of second-pillar pension assets which led to a large, but one-off, budget surplus in 2011 (Figure 2, Panel B). The government subsequently announced an ambitious programme of structural reforms in spring 2011, the Széll Kálmán plan, which was, together with additional measures laid out in the Convergence programme, rightly focused on curbing public expenditure. These measures, to be implemented mainly from 2012 onwards, have since been supplemented with mostly revenue-increasing measures as faltering growth prospects and, also, expected partial implementation of the earlier measures called for additional consolidation efforts. These notably include hikes in employees' social security contributions, various excise taxes and the VAT rate (from 25% to 27%, from January 2012). However, spending measures have been less well defined (for instance the review and more efficient management of public tasks and duties) or their gains may prove to be difficult to sustain (for example the freeze in public wages or indexation of family benefits and other social transfers).

Figure 2. **Net lending and fiscal consolidation**

General government, per cent of GDP or potential GDP



1. Cyclically adjusted less one-offs.
2. Projections.

Source: OECD (2011), *OECD Economic Outlook: Statistics and Projections* (database), December.

StatLink http://dx.doi.org/10.1787/888932575655

Curbing expenditure growth

With a high level of public expenditure (close to 50% of GDP), especially given Hungary's level of per capita income, additional consolidation measures should focus on the spending rather than the revenue side. Low public sector efficiency provides an opportunity to restrain spending without unduly reducing public services. General government employment, which is close to 20% of total employment, could be reduced, especially at the local level. The government took measures in that direction at end-2011. Cutting the wage bill by reducing headcounts, rather than by cutting wages, would provide

more flexibility and prevent the public sector from becoming increasingly uncompetitive in the labour market. Indeed, public sector wages already compare unfavourably with wages in the private sector (OECD, 2010a). To maximise the benefits of public-service reform, redundancies should be governed by staff performance assessments and a review of public policy priorities.

Public procurement is another area where important savings could be made. In 2008, general government and state-owned utilities' procurement represented 20% of GDP, three percentage points above the OECD average. A new simplified law on public procurement favouring the participation of small and medium-sized enterprises was adopted in mid-2011. Yet a greater opening of national procurement markets to foreign suppliers coupled with a stronger reliance on information and communication technologies would reduce costs by boosting competition, enhancing transparency and cutting administrative burdens (OECD, 2011a).

There are significant potential efficiency gains as the organisation of public transport (bus, railway and airline companies) is generating losses and requiring regular bailouts and recapitalisations from the state. Despite cuts in price subsidies, expected savings from restructuring have not been achieved so far and, instead, the government has had to increase its support. Any further bailouts have to go in tandem with a hardening of the budget constraint and, as needed, rationalisation of overall service provision. Moreover, public ownership in the potentially competitive segments of network industries should be phased out to reduce pressure on public expenditure and improve governance and efficiency.

Increasing property and environmental taxes

If the authorities need to resort to taxation to achieve consolidation, they should raise the least distortive taxes. The recent increase in VAT is favourable in this respect but the "crisis taxes", in particular the bank tax (see below), are highly distortive. They should be removed no later than the end of 2012 or 2013 (bank tax) as planned. Environmental taxes could be raised further as effective taxes on energy are among the lowest in Europe. Property taxes (notably on immovable property, net wealth, inheritances and legal transactions) are still low in Hungary, raising just around 1% of GDP in 2008, compared with an OECD average of nearly 2% of GDP. A residential property tax that was to be raised at the central level was cancelled by the Constitutional Court in 2010, even though such taxes are among the least damaging to growth (Arnold *et al.*, 2011).

Another efficient way to raise taxation is to strengthen tax collection. Two tax authorities were merged into a single institution in January 2011, and its powers and procedures enhanced in January 2012, which ought to create conditions for a more efficient fight against widespread tax avoidance. Beyond this, tax controls should be reinforced at the top and the bottom of the income distribution and supported by better inter-agency data sharing, stronger penalties and financial sanctions.

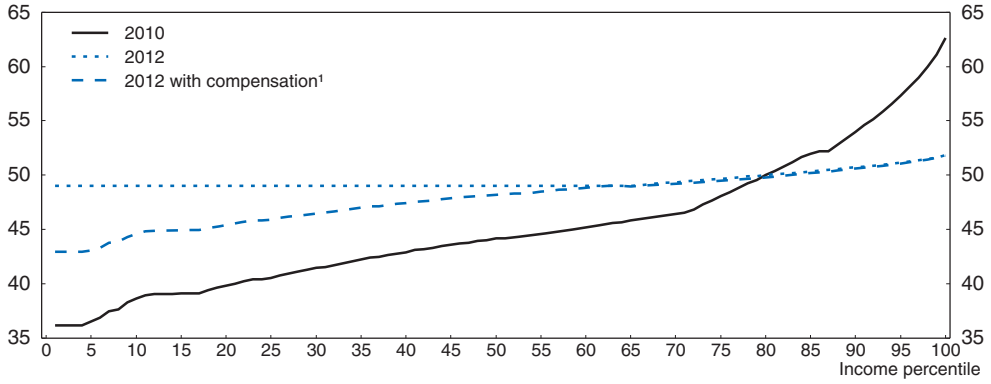
Ensuring fair sharing of consolidation efforts

Successful fiscal consolidation requires fair sharing of adjustment efforts between the rich and the poor to foster public acceptance and ensure the sustainability of tax reforms. Notwithstanding the government's motivation to improve economic efficiency through tax reforms, this issue is all the more pressing in Hungary because recent fiscal reforms have shifted the tax burden towards low-income earners. On the revenue side, across-the-board hikes in social security contributions and the removal of the employment tax credit

significantly increased the tax wedge on households at the low-end of the income distribution, especially for those without children (Figure 3). The rise in the standard VAT rate (the reduced rates have remained unchanged), while limiting economic distortions, tends to affect low-income earners more as they spend relatively more of their income on consumption. On the expenditure side, a freeze in social benefits has been more detrimental to the poorer. Tax expenditures granted to families with children rise with the level of income.

Figure 3. **Average tax wedge for different income percentiles**

For a household with no children, per cent



1. Any increase in private sector wages beyond 5% is refunded to firms through cuts in employers' social security contributions.

Source: OECD estimates based on *OECD Tax/Benefit Models* and Ministry for National Economy data.

StatLink http://dx.doi.org/10.1787/888932575674

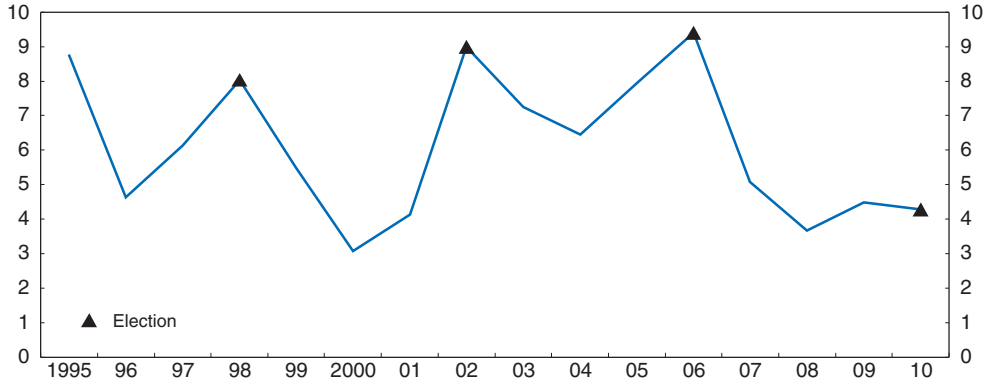
There are options to adjust burden sharing while retaining the efficiency aspects of the recent reforms, but all such measures would need to be carefully considered in the light of the need to reduce the fiscal deficit and ensure longer-term fiscal sustainability. Reinstating the recently removed employment tax credit would both provide income to low-income earners and enhance work incentives. The fiscal cost could be lowered by phasing it out from a lower income level than was previously the case. A tax-free allowance in the personal income tax system would provide relief at the low end while maintaining the overall flatness of the tax structure. Cancelling current plans to lower the effective income tax rate to 16% for those earning above the average wage would be another option to preserve progressivity. Linking child-related benefits to income rather than, as now, only the number of children would steer more money to the needy. Raising the least distortive property taxes on affluent individuals could be an option to create fiscal space for the restructuring of foreign currency loans of distressed borrowers (see below).

Strengthening the fiscal framework to bolster the credibility of fiscal consolidation

Historically, the Hungarian budget has had a marked political cycle, but not in the 2010 elections (Figure 4). This sharp change could have reflected the adoption of the fiscal responsibility law, which established fiscal rules and a high-profile independent fiscal council in 2008, and the government commitment to stick to the deficit target. However, this framework was weakened with the replacement of the former council by a new one with much less resources (three members and no budget). It does, however, have the power to veto fiscal laws, but as this could potentially lead to a fall of a government – the

Figure 4. **General government deficit and elections**

Per cent of GDP



Source: OECD (2011), *OECD Economic Outlook: Statistics and Projections* (database), December.

StatLink http://dx.doi.org/10.1787/888932575693

President of the Republic can dissolve the Parliament if a new law is not adopted by end-March – it is unclear how such an option could be constructively deployed. A debt ceiling has been introduced in the Constitution, stipulating that gross public debt should be cut below 50% of GDP at some point in the future. According to the economic stability law adopted in December 2011, this ceiling is backed by a debt rule that stipulates that the public debt can increase only by expected inflation minus half of expected real GDP growth, as long as the debt-to-GDP ratio is above 50%. It also stipulates that the debt rule will come into force only in 2016, while the targets of the Convergence program of 2011 will apply in the meantime.

The new fiscal framework could be improved. Increased flexibility would reduce its pro-cyclical bias. The escape clause dealing with economic contingencies ("significant and enduring national recession") may be too restrictive since the rule could turn out pro-cyclical in some instances: for example, this could happen when economic growth is positive but the output gap still negative. Fiscal policy would be strengthened if it were set in the context of a multi-year budgeting approach, with medium-term deficit targets supported by realistic growth projections and detailed measures to achieve the targets. The new act on economic stability subjects changes of some regulations of the tax system (*e.g.* the flat-rate taxation of personal income), pension system and budget management to a two-thirds majority in Parliament. This risks unduly restricting needed flexibility in the future. Although the definition of the public debt is close to the Maastricht definition, making it strictly identical would increase transparency. More broadly, public acceptance of the debt rule should be bolstered by removing the stipulation that most of the prerogatives of the Constitutional Court in economic matters are suspended as long as the debt ratio is above 50% of GDP. This would be one measure to restore a better functioning of checks and balances. Finally, the analytical capability of the fiscal council should be strengthened by stepping up the staffing and the budget; however, its excessive power to veto the budget should be removed as it could potentially lead to a fall of a government. Also, the fact that one member of the fiscal council can only be replaced if a two-thirds majority in the Parliament can agree on a new candidate, risks further undermining its political acceptance in case of a political gridlock.

Credible fiscal policy should help monetary policy easing

In 2011, headline inflation rose above the central bank's medium-term inflation target of 3% driven by higher food and energy prices, weakly anchored inflation expectations and recent currency weakness. As a result, the policy rate was raised by 75 basis points to 6% in early 2011 and to 7% at end-2011, despite a large degree of slack in the economy. The exchange rate is a key inflation transmission channel owing to the large trade openness of the economy, while the pass-through of monetary policy through the interest rate channel is weakened in the presence of high foreign currency indebtedness. Moreover, given a large external debt, in periods of heightened tensions in financial markets the monetary authorities' scope to reduce interest rates is constrained by rising risk premiums. In this context, price pressures are likely to intensify temporarily in 2012 in the wake of currency weakness and substantial increases in indirect taxes. A credible fiscal retrenchment would create conditions for monetary policy accommodation.

Several important amendments to the law on the central bank have been introduced, affecting the institutional framework of monetary policy. A new procedure was established to select the external members of the Monetary Policy Council (MPC) by a parliamentary committee and four new members were appointed this way in early 2011. Further amendments subject to a two-thirds majority were introduced at the end of 2011. The power of the governor to nominate his two deputies, also members of the MPC, was repealed and transferred to the prime minister, while the maximum number of MPC members was raised from seven to nine and that of deputy governors from two to three. Although such appointment procedures exist in many OECD countries, they represent a clear departure from best practices (Cukierman *et al.*, 1992; European Commission, 2006). Undertaken against the backdrop of frequent government criticism of the central bank decisions and its governor, multiple previous changes to the law (which have already significantly cut the remuneration of the governor and his deputies), these changes could undermine central bank independence, especially if implemented before the end of the mandate of the current governor. The European Central Bank and European Commission have expressed significant concerns about central bank independence on several occasions. The authorities have announced their readiness to resolve these issues. Furthermore a transitional provision of the new constitution allows for a merger of the central bank with the Hungarian Financial Supervisory Authority (HFSA) into a new institution. Although the government indicated that such merger will not happen until the end of the current governor's mandate, the fact that the central bank governor would become deputy of the new institution is incompatible with the provisions of the Treaty on the Functioning of the European Union, as well as the Statute of the European System of Central Banks.

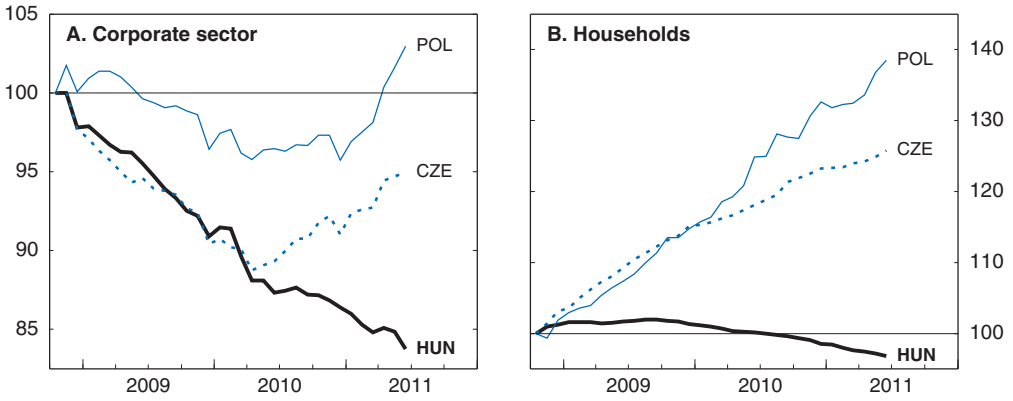
Facilitating household deleveraging without hurting banks is the key to putting growth on a sound footing

Actions taken so far have put a high burden on the banking sector, risking credit rationing

Recent research of the central bank shows that two-thirds of the fall in corporate credit is attributed to supply factors (Sóvágó, 2011) and there is increasing evidence of credit rationing and no recovery in lending (Figure 5). Moreover, high unemployment and households' large exposure to foreign currency induced a sharp increase in overdue and renegotiated loans. Restoring a proper functioning of financial intermediation requires

Figure 5. **Corporate and household lending**

Exchange rate adjusted, October 2008 = 100



Source: MNB (2011), *Report on Financial Stability*, Magyar Nemzeti Bank, November.

StatLink http://dx.doi.org/10.1787/888932575712

both cleaning up banks' balance sheets and helping households to deleverage. These two objectives could conflict with each other, and also with fiscal consolidation. In practice, the authorities have imposed most of the burden on the banking sector. An exceptional bank levy was introduced in 2010 to help fiscal consolidation. This levy is very high by international comparison and even currently unprofitable institutions are subject to it, as its base is the historical value of the stock of assets. A law promulgated in September 2011 allowed households to repay their foreign currency loans unilaterally in a single instalment at favourable exchange rates. This law mostly benefited non-liquidity constrained individuals; and to increase the take-up rate tax reliefs have been granted to employers in return for a lump sum support to employees taking part in the scheme. The early repayment measure is expected to have been widely used with at least 20% of performing loans repaid through this scheme. Following additional provisioning efforts related effective losses for banks amounted to one third of the accumulated loan-loss provisions. Overall, as some of the above policies undermine creditors' rights and interfere with private contracts, there is a risk that foreign banks may withdraw from the Hungarian market; some have already announced either a freeze or a downsizing of their network in Hungary because of these policies.

New measures should focus on financially constrained households and a rapid clean-up of banks' balance sheets

The burden of restructuring overdue loans should take into account the fiscal space of the government, the repayment ability of borrowers and the stability of the financial sector. An efficient restructuring programme should target only those borrowers who are distressed; who have high repayment-to-income ratios and negative equity. To provide the right incentives, the program should be voluntary for both banks and borrowers and should be designed in consultation with the central bank and the financial supervisor. To induce banks to participate in loan restructuring, the government should not rely on forbearance (such as allowing banks not to put aside provisions for restructured loans without overdue payments), but could rather offer incentives such as partial tax credits for restructured loans.

The mid-December 2011 agreement between the government and the banking association is a significant improvement compared to earlier schemes. The non-performing foreign currency mortgages would be converted into domestic currency and 25% of the debt would be forgiven for mortgages delinquent for more than 90 days, if the payment default was due to a verifiable and substantial deterioration in the financial standing of the debtor, with the government providing interest rate subsidies. Moreover, an earlier scheme fixing the exchange rate and accumulating the difference with market rates on a separate account has been amended as well. The total repayment (principal and interest) of the accumulated difference will be delayed and the interest part of the latter will be equally shared between banks and the government, which delays the impact on banks' balance sheets. In both cases, the authorities should create an appropriate fiscal space, while ensuring a fair sharing of efforts as mentioned previously. In their turn, banks will be able to deduct 30% of the losses resulting from the early foreign currency mortgage repayment scheme and the programme of debt forgiveness of non-performing loans from the bank levy in 2011 and 2012, respectively. While the December agreement has the potential to create the right incentives for loan restructuring, the process of conversion of non-performing loans still fails to apply objective criteria to target truly distressed borrowers, such as repayment-to-income ratios and negative equity. Such targeting is essential to avoid moral hazard problems, which might be significant, because the government has created an atmosphere of bail-out expectations in the previous few months and some borrowers could have stopped paying their instalments. If banks need to raise their capital ratios to absorb losses, they should be encouraged to do so by raising the level of capital (by refraining from distributing dividends or issuing new equity) so as not to downsize their loan portfolio. Finally, in order to help clean up banks' balance sheets, a National Asset Management company will purchase 25 000 residential properties by 2014, focusing on delinquent borrowers who have one or more children and are in the most social need.

To strengthen banks' balance sheets and ease credit rationing, the existing financial levy should be replaced by a less distortive tax, such as one based on a proxy of banks' value-added. Since financial institutions are exempted from value added tax, such a tax on financial activities might be desirable to create a level playing field between financial services and other sectors. In addition, financial taxation could serve as an important complement to regulation in addressing macro-prudential concerns. If the Hungarian authorities opt for a "Pigouvian" tax, its base should offer in-built incentives for financial institutions to accumulate capital and raise deposits, reducing reliance on more volatile cross-border funding in foreign currencies. The mid-December agreement with banks confirmed earlier plans to halve the bank levy in 2013. As from 2014 the bank levy will be adjusted to the prevailing relevant legal framework of the European Union, or the practice in effect in member states.

Appropriate measures to support the labour market and prevent an increase in structural joblessness

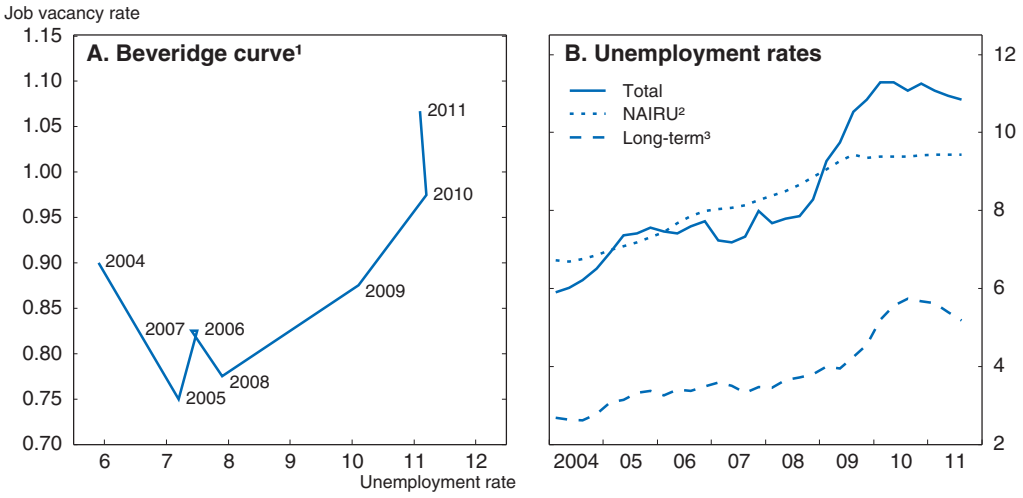
At 47% in 2010, the ratio of the minimum to the median wage was close to the OECD average, though it was 2-3 percentage points higher than in regional peers (Poland and the Slovak Republic) and more than 10 percentage points higher than in the Czech Republic. On 1 January 2012, the authorities raised the standard minimum wage by 19% and the minimum wage for skilled workers by 15%. Despite a complex system of some partial and temporary financial offsets offered to firms as of January 2012, such increases will hinder

employment growth and reduce cost competitiveness in the medium term. In this context, the government should ensure that further increases do not exceed consumer price inflation for a prolonged period, so as to reduce the level of the minimum wage relative to the median wage over time.

Hungary has strong regional disparities in unemployment rates and low internal labour mobility, which contribute to a high incidence of long-term unemployment (close to 50%) and poor matching in the labour market (Figure 6). A recent cancellation of the job search benefit for youth and prime age workers will worsen worker mobility. Moreover, the duration of unemployment benefits has been reduced to only three months and capped at the level of the minimum wage, which, with a weak labour market risks aggravating mismatch problems. These can lead to an inefficient allocation of labour and turn cyclical unemployment into structural, which would call for an extension of the duration of unemployment benefits. On the other hand, a recent amendment of the labour code has created a welcome possibility to differentiate the minimum wage. This creates an opportunity to introduce such differentiation on a regional basis. Labour demand could be supported by reducing the minimum wage in regions where productivity, living costs and reservation wages are low.

Figure 6. **Beveridge curve, long-term unemployment and NAIRU**

Per cent



1. Average of quarterly data for job vacancies. Data for 2011 show the average of the first three quarters.
2. Non-accelerating inflation rate of unemployment.
3. Twelve months or over.

Source: Eurostat (2012), "Labour Market", *Eurostat Database*, January and OECD (2012), *OECD Economic Outlook: Statistics and Projections* (database), January.

StatLink http://dx.doi.org/10.1787/888932575731

The authorities have put a strong emphasis on a new public works programme to raise labour demand. The aim is to create financial incentives to resume work by providing a higher income than social assistance, but lower than the minimum wage. Yet, the experience of OECD countries suggests that subsidised public sector employment programmes may create strong lock-in effects (OECD, 2010b). Empirical evidence indicates they are the least effective form of active labour market policies, whereas training programmes are associated with positive medium-term impacts (Card *et al.*, 2010). Evidence for Hungary also shows that

various public works schemes in the past failed to improve the employability of participants or provide a foothold in the labour market (Fleck and Messing, 2010; Budapest Institute, 2011). Therefore, the effectiveness of the public works programme should be fostered by providing significantly scaled up training and skill-upgrading services for participants so as to ease their transition to the primary labour market.

Employer social security contributions are high and should be reduced in a deficit-neutral way. A new scheme permanently reducing employers' payroll taxes for workers in elementary occupations will be available in 2013. Temporary and targeted reductions in labour costs may also support job creation in the early stages of recovery and overall increases in labour demand (OECD, 2010c; 2011b). With this as a background, the authorities could continue the programme of marginal employment subsidies for net job creations ("SME + programme") while ensuring low compliance costs to increase the take-up rate. Temporary gross hiring subsidies for career-starters ("Start programme") could be also useful in supporting labour demand, conditional on an improved targeting. Instead, programmes for parents returning to work after parental leave ("Start plus") and for older, low-skilled or long-term unemployed ("Start extra") appear to be well targeted on disadvantaged groups. Both programmes were replaced with a new programme ("Start bonus") in 2012.

Box 1. **Core recommendations on short-term policy priorities**

Ensuring economic stabilisation through credible fiscal consolidation

- Conclude an agreement with multilateral organisations to bolster confidence.
- Effective independence of the central bank should be guaranteed.
- Ensure that fiscal consolidation is sustained by curbing spending, improving revenue collection and, if needed, raising only the least distortive taxes.
- Ensure a balanced distributional impact of fiscal consolidation by means testing child-related benefits, reinstating the employment tax credit, adopting a tax-free allowance in the personal income tax system, cancelling plans to cut the effective personal income tax rate for above-average earners, and raising the least distortive property taxes on affluent individuals.
- Raise the effectiveness of the fiscal council by allocating it higher staff and budget resources to accomplish its tasks. Remove its power to veto fiscal laws.

Dealing with households' indebtedness while avoiding credit rationing

- Target debt restructuring programmes to distressed borrowers based on repayment-to-income ratios and/or negative equity.
- When the exceptional bank levy expires in 2013, replace it by a less distortive tax. Ensure recapitalisation of banks if needed by recommending banks to retain earnings and raise high-quality new equity.

Avoiding structural unemployment

- Ease transition to the primary labour market by restructuring the public works programme to provide significantly scaled up training and skill-upgrading services.
- Ensure that further increases in the minimum wage do not exceed consumer price inflation to reduce the minimum-to-median wage ratio.

Medium-term structural policies to foster potential output growth

Making debt sustainability less sensitive to macroeconomic shocks

The debt-to-GDP ratio is sensitive to fluctuations in exchange rates because half of the public debt has been issued in foreign currency (about 38% excluding EU/IMF loans) and 50% of marketable debt is held by non-residents. The steep depreciation of the currency at end-2011 was sufficient to wipe out all debt reduction efforts achieved by using part of the second-pillar pension assets in mid-2011. In addition, the share of Hungarian debt with shorter maturity has increased since the outset of the financial crisis, raising rollover risks. To reduce such risks, the authorities should start reducing the share of public debt in foreign currency and lengthen its maturity as soon as possible, and adjust the portfolio strategy by taking into account lessons from the current crisis. To facilitate debt issuance in forint and make up for a reduced role of the second-pillar pension funds following the assumption of most of their assets, the government should encourage the development of the third (voluntary) pension pillar (see below). This could help maintain a significant share of resident subscribers in domestic currency.

Long-term fiscal sustainability needs to be fostered by further reforming the pension system

Hungary's long term fiscal sustainability significantly improved between 2006 and 2009 in the wake of parametric reforms of the pension system and improvements in the fiscal position. As a result, sustainability gap indicators, as estimated by the European Commission in 2009, were closed accordingly. However, fiscal sustainability is likely to have worsened, as the underlying fiscal position deteriorated in both 2010 and 2011 (Figure 2, Panel A). Moreover, as the financial and economic crisis has significantly dented potential output and growth prospects, fiscal sustainability has been negatively affected as well. Finally, the dissolution of the second pillar of the pension system in 2011 worsened fiscal sustainability as the transfer of implicit pension liabilities to the state pillar was not fully offset by the use of pension assets to cut the public debt as part was used to finance current expenditure.

Early retirement options in the general pension regime were eliminated, except for women with 40 years of contributions, which is expected to improve fiscal sustainability. Restricting access into different other early retirement pathways would boost the employment rate of older workers and reduce spending. In mid-2011, a constitutional amendment to that aim was adopted by Parliament, stating that any pension granted before the legal retirement age may be reduced (by subjecting it to personal income tax), transformed into a social benefit, or even, for beneficiaries finding employment, terminated. From 2012, the level of new and existing retirement benefits of special pension regimes (up to the statutory retirement age) will be reduced by an amount equivalent to the income tax, although eligibility conditions for all early retirement options will be left unchanged. Beyond this, aligning early retirement privileges of different special regimes (law enforcement officers, miners, chemists or artists) with the general pension system should remain a priority. More generally, to reduce replacement rates, all pension benefits (and not only new ones from 2013) should be made liable to the personal income tax, which would share consolidation efforts between current and future pensioners.

Ensuring stable and affordable financing of the economy while minimising financial risks

Lower financing cost can be fostered by increasing transparency

The costs of banking intermediation are high in Hungary, reflecting mainly weak competition, as indicated by high market power and operating costs. Competition needs to be strengthened, in particular in the segment of household lending. Until recently, banks were allowed to change their lending rates in a unilateral manner in many cases, which was hindering the comparability of loan products and inducing lock-in effects for customers. Progress has been made with a recent law which imposes transparent rules for the setting of interest rates on mortgages. To put an end to unilateral contract modifications, this legislation should be fully implemented and a similar law created to cover all types of loans. The credit information system remains underdeveloped, leading to potential adverse selection problems and higher costs for borrowers. The recent creation of a legal framework for mandatory sharing of positive and negative information regarding individual loans is an important step forward, but it should make information sharing between banks binding for all borrowers. The disciplining role of credit information sharing should be enhanced by lengthening its memory of defaults to ten years and if debt is recovered to three years, which is advisable in a country with a relatively poor credit culture. The central bank or the financial supervisor should be allowed to retain the information for a longer time for supervisory purposes, without an unnecessary duplication of databases.

Encouraging the development of a voluntary third pillar

The development of capital markets and other financial intermediaries is also important to provide funding to the economy. In particular, pension funds accumulate savings with long maturities that can be productively invested long term. To provide a strong incentive to invest in third-pillar pension funds, individuals need to enjoy sufficient returns. Yet, mandatory Hungarian pension funds achieved an average annual real net yield of only 1.65% over the period 1998-2010, which is very low by international comparison. Creating conditions for sound competition is necessary to boost performance, notably through more transparency. Transparency could be enhanced if pension fund members were to receive information not only about pension fund returns, but also about fees and commissions.

Bolstering macro-prudential regulation

As shown in the 2010 *OECD Economic Survey of Hungary* (OECD, 2010a), inadequate financial regulation and supervision has been one of the sources of banking difficulties in Hungary. Until recently, the responsibilities for macro-prudential policy have been very fragmented between the financial supervisor (HFSA), the central bank (*Magyar Nemzeti Bank*, MNB) and the Ministry for National Economy. A new law on the central bank passed on 30 December 2011 equips the MNB with the mandate for macro-prudential regulation backed by regulatory independence to choose its instruments. This is a welcome development because it ensures a more transparent and efficient legal framework for the allocation of responsibilities and the MNB appears to have the necessary expertise to fulfil this new role. The role of the micro-prudential supervisor, HFSA, was also strengthened by equipping it with some regulatory powers. However, its financial autonomy should be enhanced through an increase in the level of supervisory fees. A transparent and clear distribution of responsibilities should exist to ensure accountability of each agency. An effective co-operation between the micro and macro-prudential supervisor is

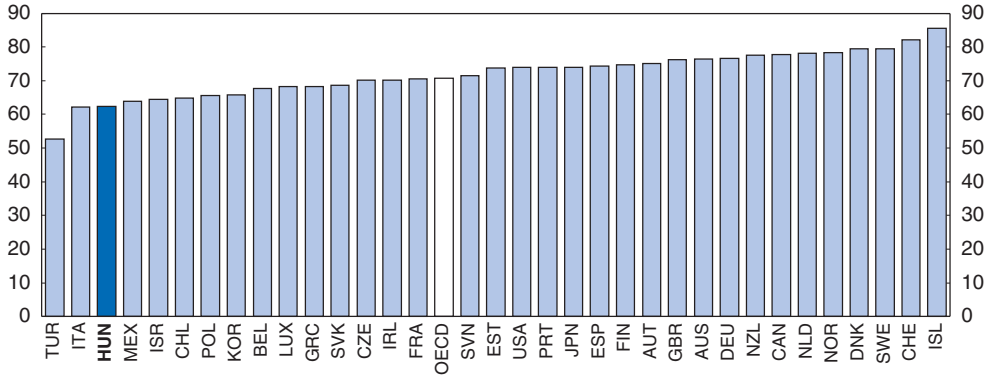
essential in order to use the macro-prudential toolkit effectively. It remains to be seen how the new system is implemented in practice and the Financial Stability Board (FSB) should ensure co-ordination of these three agencies.

Living standards can be boosted by lifting one of the lowest participation rates in the OECD

Sustainable fiscal policy and a sound financial system are preconditions for durable growth, but structural reforms are also needed to better exploit existing resources and raise one of the lowest activity rates in the OECD (Figure 7). Rapid population ageing is compounding this challenge. Exclusion from the labour market is a primary cause of inequality and social problems. Hence, efforts are needed to foster the inclusiveness of the labour market for various under-represented groups, in particular low skilled, youth, elderly, women of childbearing age, disabled and the Roma.

Figure 7. **Labour force participation rates in OECD countries**

Per cent, age 15-64, 2010



Source: OECD (2011), *OECD Labour Force Statistics* (database), December.

StatLink http://dx.doi.org/10.1787/888932575750

Preserving work incentives when lowering the tax wedge

Changes in the Hungarian tax system in relation to the adoption of a flat-rate personal income tax at 16% have increased an already high average tax wedge on low-income earners and reduced it on high-income earners (Figure 3). Employees' social security contributions were hiked and the employment tax credit eliminated. In this context, there is a risk that the low-skilled could drop out of employment or shift to the informal sector. The employment tax credit should thus be re-introduced. Moreover, despite the indication of significant positive effects of taxation on the taxable income of high-income earners in Hungary (Bakos *et al.*, 2008; Kiss and Mosberger, 2011) and OECD countries (Meghir and Phillips, 2010), it is less certain to what extent such effects may occur through an increase in hours worked or, instead, through lower tax evasion and enhanced effort or creativity. The overall net impact of the flat tax on labour supply might therefore be low, all the more once the fiscal measures needed to offset the sizeable budget cost are taken into account.

Remedying youth non-employment

At close to 18%, Hungary had the lowest employment rate of youth aged 15-24 in the OECD in 2010. At the same time, more than half of all workers possess fewer qualifications

than required by their job, the highest ratio in the OECD (OECD, 2011c). In this context, Hungary lowered the age of compulsory education from 18 to 16, starting from September 2012. Lifting the overall level of educational attainment is important to increase employment prospects and wages. Furthermore, to reduce the risk of qualification mismatches, the education system has to be made more attuned to labour market needs by raising the quality of vocational education and training and better steering student inflows into tertiary education. More generally, the transition from school to work should be made less abrupt in Hungary. The experience of OECD countries shows that combining study and work is an effective pathway to enter the labour market (OECD, 2010d). With this as a background, the authorities should have refrained from lowering the age of compulsory education and, instead, continued to raise educational attainment and diversify educational pathways by alternating study and on-the-job training through apprenticeship programmes and compulsory internships.

Promoting the participation of the elderly

At slightly below 35%, Hungary had the third lowest employment rate of workers aged 55 to 64 in the OECD in 2010. Past and future parametric reforms of the first pillar of the pension system (as discussed above) should favour longer activity. At the same time, promoting lifelong learning starting at mid-career would support the productivity of older workers and, by preventing the risk of a growing misalignment with their wages, their employment. The persistence of lifelong learning could be encouraged by creating individual learning accounts. Moreover, public subsidies supporting adult learning of low-skilled and low-educated workers through vouchers and individual allowances could enhance their take-up incentives.

Reforming family policies to enhance women's labour market participation

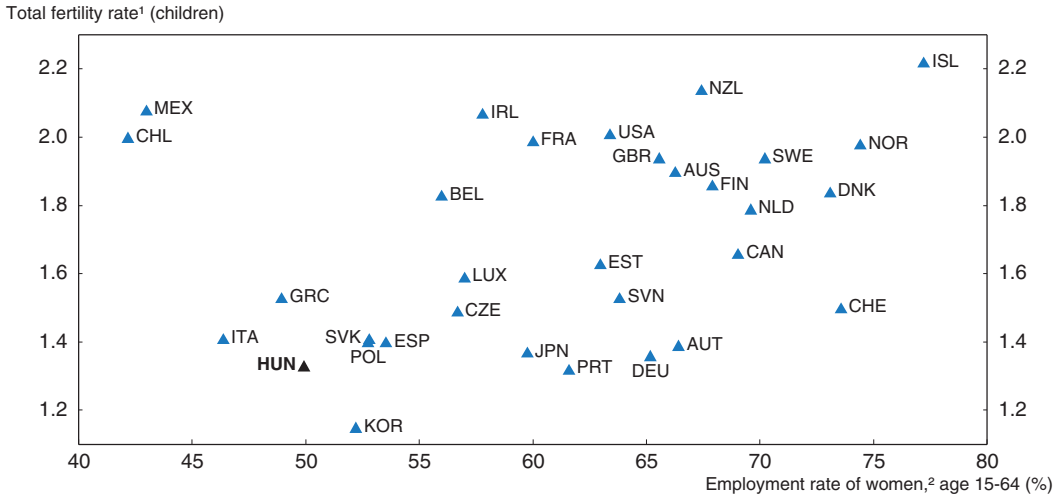
In Hungary, family policies are geared to increasing the fertility rate through high public spending on family benefits and prolonged duration of post-maternity parental leave. Nevertheless, the fertility rate, at 1.33 children per woman in 2009, is the third lowest in the OECD. Moreover, labour market participation of women with young children is low in Hungary. Nowadays affluent OECD countries with high employment rates of women also tend to have high fertility rates (Figure 8). Policies that favour the reconciliation of work and care responsibilities would have a positive effect on fertility patterns, though the structure of family policies also plays an important role (OECD, 2011d). Best-performing countries in terms of employment outcomes have short post-maternity parental leave and low cash benefits and tax breaks per child. At the same time, they also have high enrolment rates in childcare services for children under three. Hungarian family policies should be overhauled in that direction. In particular, spending on cash benefits and tax expenditures should be re-oriented towards the development of high-quality early childhood education and care services for children aged under three.

Improving labour market integration of the disabled

At around 10% of the working age population in 2010, the share of disability benefit recipients in Hungary is the second highest in the OECD, and only around a quarter of beneficiaries work at all. In 2011, the government announced a large-scale review of disability rights with the objective to bring 110 000 of 220 000 disability pensioners under the age of 57 back into the labour market. Retesting beneficiaries according to new assessment criteria is an unprecedented and welcome step. Despite initial plans for a swift implementation, the

Figure 8. **Employment rates of women and total fertility rates**

Per cent, 2009



1. Number of children that would be born to a woman over her lifetime. See Indicator SF 2.1 of the *OECD Family Database* for further information. Israel has a rate of 3 and is excluded from this figure as an outlier.
2. Turkey has a rate of 24% and is excluded from this figure as an outlier.

Source: OECD (2011), *OECD Family Database* (*www.oecd.org/els/social/family/database*) and *Employment and Labour Market Statistics* (database), July.

StatLink http://dx.doi.org/10.1787/888932575769

authorities have decided to spread it over several years, which can be justified by weak labour market conditions at present. Disabled people who remain out of the labour force over an extended period lack relevant labour market qualifications and recent work experience. Their integration could be fostered through comprehensive re-employment services contracted out to the private sector and supported by an outcome-based funding mechanism (OECD, 2010e). The measure could be financed by re-allocating expenditure away from wage subsidies for sheltered firms failing to place a certain share of disabled workers in the regular job market. At the same time, targeted tax incentives, such as a recent introduction of employers' tax allowances, may promote labour demand for disabled workers.

Tackling the problem of labour market exclusion of the Roma

In Hungary, the Roma represent around 7% of the population. They enjoyed high labour market participation during the period of planned economy, but took the brunt of the transformation shock with the decline in demand for unskilled labour in the early 1990s. As a result, the employment rate of the Roma became 40 percentage points lower than that of the non-Roma and remained persistent, mainly driven by lower educational attainment (Kertesi, 2010; Kertesi and Kézdi, 2011). Roma parents should be encouraged to send their children to pre-school before the compulsory age, which is key to prevent the initial learning gaps that increase educational segregation. Inequities are also reinforced by early tracking and a free school choice adopted in 1993, which led to a strong sorting by income and ethnicity between schools (Kertesi and Kézdi, 2010). In this context, it is extremely important to encourage the integration of Roma and non-Roma pupils across schools. Merging vocational training and vocational secondary schools would also foster access of Roma to quality education as almost two-thirds of Roma children in post-primary education attend only the former type of school, conducive to high dropout rates (OECD, 2010a).

Improving health outcomes and the system

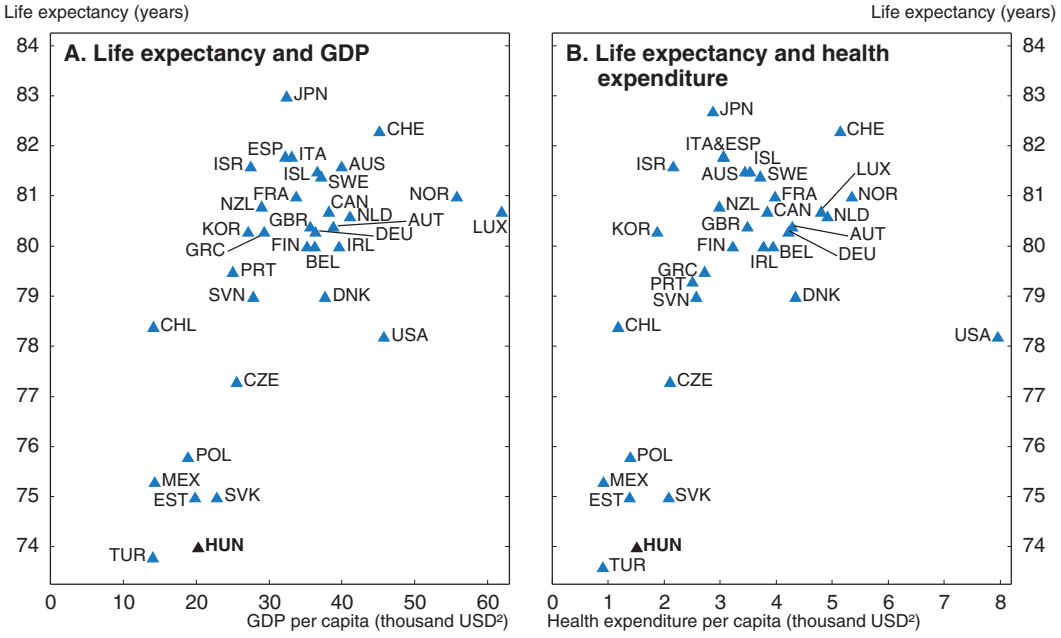
Comparatively poor health outcomes negatively impact growth

Besides being an important determinant of well-being, health outcomes are linked to economic outcomes. Healthy individuals are likely to enjoy longer and more productive lives, and to invest in their human capital, boosting growth. In return, higher levels of GDP per capita allow additional spending on health, which is an important issue in view of long term pressures stemming from population ageing and cost pressures in health care.

According to the latest available data up to 2009, the health status of the Hungarian population was among the poorest in the OECD and excess mortality among the working-age population has been a drag on growth. While these outcomes have been driven by the economic development and lifestyle risks, they also reflect the limited effectiveness of the health care system in improving health outcomes (Joumard *et al.*, 2010), despite generating high health care outputs, such as a high number of doctors' consultations and hospital discharges. Health outcomes are behind levels that are consistent with Hungary's level of development or the level of fiscal expenditure on health, although gains in life expectancy have been broadly in line with those in other OECD countries (Figure 9). Limited fiscal space has heightened the urgency of health care reforms to improve cost effectiveness and better reallocate resources to areas where the needs are the most pressing.

Figure 9. **Life expectancy at birth relative to national income and health expenditure**

2009[1]



1. In Panel A, 2007 for Canada and 2008 for Italy. In Panel B, 2007 for Greece, 2008 for Australia, Italy, Japan, Portugal and Turkey.
2. In US dollars at current purchasing power parities.

Source: OECD (2011), *Health at a Glance 2011*.

StatLink http://dx.doi.org/10.1787/888932575788

Better allocating public funds

Health care providers in Hungary are funded by the National Health Insurance Fund Administration (NHIFA) for recurrent costs and out of general revenues for capital costs, effectively separating investment decisions from the utilisation of health care services. This in turn has negative repercussions for service delivery and quality. For instance, there is evidence of the use of less effective or older technologies, inappropriate care and provision of unnecessary services. In the absence of adequate returns on private capital, including the coverage of depreciation costs, private sector involvement in the health care sector has also remained limited. In addition, this practice has placed a substantial burden on local governments with a maintenance obligation as the owners of providers. One potential way to rectify this problem is to incorporate the price of capital into health care provider payment systems, which would: *i)* make providers realise that capital is a costly input; *ii)* induce providers to ensure an appropriate mix of capital and labour; and *iii)* improve the comparability of costs across different health care providers.

Despite several major attempts to limit them, the number of hospital beds in Hungary remains above the OECD average, reflecting a bias towards inpatient care in the delivery of health care services. Local governments own a great majority of hospital beds and health care investments are guided by local economic interests, leading to poor co-ordination and a wasteful supply of equipment. The authorities should ensure that the restructuring of inpatient institutions facilitates the reallocation of resources from inpatient to outpatient and long-term care, consistent with health care needs of the population and efficiency considerations. The takeover of the Budapest area and county hospitals effective 1 January 2012 could be an important opportunity to better organise the inpatient institutions and allocate funds.

Strengthening the quality and delivery of health care services

Even though measures strengthening the quality and delivery of health care services may raise public expenditure, they should boost the efficiency of the health system and create conditions for a better allocation of resources. In particular, primary care has a major role in the delivery of health services in the majority of health systems, but Hungary, as most other OECD countries, spends little on primary care. The number of general practitioners (GPs) relative to specialists is among the lowest in the OECD. An important step in strengthening primary care is to attract a greater number of doctors. A quota system was introduced in 2000, giving "practice rights" (*praxisjog*) to each family doctor with a territorial supply obligation in that year. It has become a major obstacle to the entry of young family doctors into the system. The purchase of practice rights should be facilitated in the short term and steps should be taken to abolish them in the long term to ease the entry of young GPs into the primary care system. Remuneration should also be improved to attract a greater number of GPs.

A better alignment of the capacity of providers to the needs of patients has been a stated goal of successive governments since 2002. In 2006, the government explicitly recognised that the structure of the health care delivery system (the ratio of acute, chronic, and nursing care capacities) in relation to morbidity and mortality patterns was distorted. Furthermore, it was argued that the geographical distribution of the capacities was unequal, resulting in unfair disparities in access to care. The authorities need to perform systematic health planning, needs assessments and performance measurements, and utilise them in the purchasing decisions of the NHIFA.

Addressing informal payments and insufficient pay

Informal payments are deeply rooted in the Hungarian health care system. Such payments not only influence the efficiency of the health care system and possibly undermine policy objectives, but also are a highly regressive way of funding health care (Szende and Culyer, 2006). Thus they should be strongly discouraged by being considered as a corrupt practice subject to sanctions. Fighting corruption and retaining health care professionals could also be enhanced by setting adequate remuneration: an increasing number of health care professionals have been leaving the country, with a low level of salaries reportedly being the main push factor. Despite some recent targeted increases, the average salary of health care workers across all categories has stood at a relatively low level, significantly below the economy-wide average (87% in 2010), and by international standards.

Box 2. **Core recommendations on medium-term policy priorities**

Ensuring long-term fiscal sustainability

- Reduce public debt exposure to foreign currency loans and increase debt maturity. To smooth issuance in forint, increase the pool of subscribers by developing the third pension pillar.
- Continue to reform the first pillar of the pension system by making all pension benefits liable to income tax and effectively closing pathways into early retirement schemes (including for special pension regimes).

Ensuring sustainable and least costly financial intermediation

- Reduce borrowing cost by extending transparent rules on setting fixed or varying interest rates to all loans.
- Strengthen the financial independence of the Financial Supervisory Authority by increasing the level of supervisory fees.

Raising labour force participation

- Raise educational attainment and diversify educational pathways by alternating study and on-the-job training through apprenticeship programmes and compulsory internships.
- Promote the development of lifelong learning starting at mid-career and ensure its persistence by creating individual learning accounts and participation of low-skilled workers through public subsidies.
- Reduce the length of post-maternity parental leave and re-orient public spending from cash benefits and tax expenditures towards high-quality early childhood education and care services for children under three.

Improving health policies

- Set adequate remuneration levels to retain health care professionals in the system.
- Unify the financing of providers for recurrent and capital costs.
- Ensure that the restructuring of inpatient institutions facilitates the reallocation of resources from inpatient to outpatient and long-term care.
- Strongly discourage informal payments to improve access to health care services.

Bibliography

Arnold, J., B. Brys, C. Heady, Å. Johansson, C. Schwellnus and L. Vartia (2011), "Tax Policy for Economic Recovery and Growth", *The Economic Journal*, Vol. 121, No. 550.

Bakos, P., P. Benczúr and D. Benedek (2008), "The Elasticity of Taxable Income: Estimates and Flat Tax Predictions Using the Hungarian Tax Changes in 2005", *MNB Working Papers*, No. 2008/7, Maygar Nemzeti Bank.

Budapest Institute (2011), *The Efficiency of Municipal Public Works Programmes*, Budapest Institute for Policy Analysis, August.

Card, D., J. Kluve and A. Weber (2010), "Active Labour Market Policy Evaluations: A Meta-Analysis", *The Economic Journal*, Vol. 120, No. 548.

Cukierman, A., S. Webb and B. Neyapti (1992), "Measuring the Independence of Central Banks and Its Effect on Policy Outcomes", *World Bank Economic Review*, Vol. 6, No. 3, World Bank.

ECB (European Central Bank) (2011), "Opinion of the European Central Bank on the Magyar Nemzeti Bank", No. CON/2011/104, ECB.

European Commission (2006), "Appointment Procedures in Monetary Policy-Making Bodies", *Briefing Note*, DG Internal Policies of the Union, European Commission.

Fleck, G. and V. Messing (2010), "Transformations of Roma Employment Policies", in K. Fazekas, A. Lovász and A. Telegdy (eds.), *The Hungarian Labour Market: Review and Analysis 2010*, Institute of Economics, Hungarian Academy of Sciences and National Employment Foundation.

Joumard, I., C. André and C. Nicq (2010), "Health Care Systems: Efficiency and Institutions", *OECD Economics Department Working Papers*, No. 769, OECD Publishing.

Kertesi, G. (2010), "Roma Employment at the Turn of the Millenium. An Analysis of the Nationwide Representative Rome Survey of 2003", in K. Fazekas, A. Lovász and A. Telegdy (eds.), *The Hungarian Labour Market: Review and Analysis 2010*, Institute of Economics, Hungarian Academy of Sciences and National Employment Foundation.

Kertesi, G. and G. Kézdi (2010), "Segregation of Primary Schools in Hungary. A Descriptive Study Using Data from the National Assessment of Basic Competences of 2006", in K. Fazekas, A. Lovász and A. Telegdy (eds.), *The Hungarian Labour Market: Review and Analysis 2010*, Institute of Economics, Hungarian Academy of Sciences and National Employment Foundation.

Kertesi, G. and G. Kézdi (2011), "The Roma/Non-Roma Test Score Gap in Hungary", *American Economic Review*, Vol. 101, No. 3.

Kiss, Á. and P. Mosberger (2011), "The Elasticity of Taxable Income of High Earners: Evidence from Hungary", *MNB Working Papers*, No. 2011/11, Maygar Nemzeti Bank.

Meghir, C. and D. Phillips (2010), "Labour Supply and Taxes", *The Mirrlees Review*, Institute for Fiscal Studies.

OECD (2010a), *OECD Economic Surveys: Hungary 2010*, OECD Publishing.

OECD (2010b), "Supporting Labour Demand", *Position Paper*, OECD, July.

OECD (2010c), *OECD Employment Outlook 2010: Moving beyond the Jobs Crisis*, OECD Publishing.

OECD (2010d), *Off to a Good Start? Jobs for Youth*, OECD Publishing.

OECD (2010e), *Sickness, Disability and Work – Breaking the Barriers: A Synthesis of Findings Across OECD Countries*, OECD Publishing.

OECD (2011a), *Government at a Glance 2011*, OECD Publishing.

OECD (2011b), *OECD Economic Outlook*, Vol. 2011/1, No. 89, OECD Publishing.

OECD (2011c), *OECD Employment Outlook 2011*, OECD Publishing.

OECD (2011d), *Doing Better for Families*, OECD Publishing.

Sóvágó, S. (2011), "Identifying Supply and Demand in the Hungarian Corporate Loan Market", *MNB Occasional Papers*, No. 94, Magyar Nemzeti Bank.

Szende, A. and A.J. Culyer (2006), "The Inequity of Informal Payments for Health Care: The Case of Hungary", *Health Policy*, Vol. 75, No. 3.

ANNEX A1

Progress in main structural reforms

The objective of this annex is to review action taken since the previous *Survey* (February 2010) on the main recommendations from previous *Surveys*, which are not reviewed and assessed in the current *Survey*.

Past recommendations	Actions taken and current assessment
A. Business sector policies	
Continue to reduce barriers to firm creation and to stimulate entrepreneurial dynamism.	An act on Private Entrepreneur and Private Enterprise that entered into force in January 2010 substantially alleviated starting a business as a sole proprietor. A New Széchenyi plan allocated around 1.7% of GDP of support to SMEs in the period 2011-13, notably for venture capital financing and micro loans. The government has launched a comprehensive programme to cut compliance costs for businesses by around 1.8% of GDP by end-2013.
Upgrade the capacity to design region-specific development projects to speed up the use of EU funds.	Regulations have been simplified and harmonised, which has contributed to quicker decision making and project-selection procedures in the absorption of EU funds. Yet caution is necessary to ensure a rigorous cost/benefit analysis of projects.
Increase research and development intensity and strengthen collaborative links between research institutions, schools, universities and the business community.	Since mid-2010, 13 universities have benefited from additional funding – through tendering procedures – to support research and development activities and collaboration between higher education institutions and with the private sector, both domestically and abroad.
B. Fiscal policy	
Establish a unit with a mandate to monitor and assess reforms in public administration.	A Public Administration Reform programme was launched in June 2011. A Department for the Reform of Public Administration and Strategic Planning in the Ministry for Public Administration and Justice is responsible for the monitoring of the implementation of the Programme for evaluating the measures taken.
Strengthen the government's public procurement monitoring capacity and the State Audit Office, and enhance the political will in support of the Office's enforcement.	A new mechanism has been introduced to monitor the government's public procurement activities. Since April 2011, a preliminary approval of the Minister for National Development is required to start a public procurement procedure and the monitoring activity covers the whole life cycle of the procedure.
Bolster the audit powers of the State Audit Office by extending them to cover all local government accounts.	No action taken.

Past recommendations	Actions taken and current assessment
C. Financial policies	
To mitigate solvency risks for households, the array of mortgage insurance should be widened.	No action taken.
Consumer protection, in particular the legal framework, should be further strengthened.	The jurisdiction of the Hungarian Financial Supervisory Authority concerning consumer protection was established in 2010. A Financial Arbitration Board was also created to handle consumers' complaints as of July 2011.
Independent agents should receive fees only from the customer and a fixed amount per type of transaction. They should be required to present several options to the customer. Those agents who work for or on behalf of banks should disclose the nature and the amount of their remuneration to the customer.	Following a government decree from June 2010, brokers have to include the amount of their remuneration in the contract and the level of fees linked to quality requirements.
The supervisor should not be held liable for the damages its regulations may cause to regulated institutions.	No action taken.
D. Education policies	
Increase the ratio of actual teaching hours to total statutory working time. The resulting gains in efficiency could be used either to reduce the number of teachers or increase the relatively low salaries of teachers, or a combination of both.	A new regulation of teachers' workload aiming to make their employment more efficient was adopted by Parliament in late 2011.
There remains scope for further school mergers, and in the interests of providing high-quality education, they should continue, despite the transport costs involved.	A recent decision to take over schools by the central government creates an opportunity for mergers.
Continue the programme of assessing tertiary institutions beyond 2010, and ensure that the continuing subsidy of failing institutions and faculties is conditional on rapid improvement.	Higher education institutions had to develop a performance assessment system on personal, department and faculty levels. Besides, the best universities were granted a status of research universities and additional financial resources.
The student loan system is appropriate and should continue to be encouraged.	No action taken.
E. Labour market policies	
Monitor the new unemployment benefit system that includes the Job Search Allowance.	The maximum length of job search allowance has been reduced (from 270 to 90 days), eligibility conditions have been tightened. The job search benefit (previously available up to 90 days) has been terminated (except for older workers close to retirement).
F. Business environment	
Reform both the turnover-based local business tax and the non-residential property tax – both have inappropriate bases.	No action taken.
G. Competition	
Phase out price-setting for gas and electricity.	The electricity and gas market has been open to price competition for businesses from July 2010, but not the household sector.
For postal services make further progress in dealing with over-staffing and non-viable rural post offices.	Progress has been made in service provision by outsourcing post offices and introducing mobile offices.

Chapter 1

Ensuring debt sustainability amid strong economic uncertainty

Despite a deep recession in 2009 and weak growth in subsequent years, Hungary's fiscal position compares favourably with many other OECD countries. Nonetheless, the underlying fiscal balance started deteriorating in 2010 and 2011. Recognising this, Hungary's government launched an ambitious set of fiscal consolidation measures in spring 2011, the Széll Kálmán plan, which is rightly focused on curbing public expenditure. This plan, together with subsequent significant revenue-increasing measures, should help restore fiscal adjustment in 2012 and 2013. However, ensuring the sustainability of Hungarian public debt remains challenging in the context of the persistence of the sovereign debt crisis in many European economies since shifts in market sentiment could lead to unsustainable debt servicing costs. In this context, increasing the credibility of fiscal consolidation requires using several policy levers. First, the cost/risk assessment of the debt management strategy should be reassessed by taking into account lessons from the current crisis: the share of government borrowing in foreign currency will likely need to be drastically reduced. Second, additional consolidation efforts should focus more strongly on the spending side and avoid raising distortive taxes. Third, the fiscal framework should be improved by making fiscal rules less pro-cyclical and by raising the profile and political acceptance of the fiscal council through better analytical support and an enlarged mandate, while removing its power to veto the budget.

The Hungarian government has put the reduction of public debt on the top of its policy priorities. The Convergence programme released in April 2011, largely based on the Széll Kálmán plan published a month earlier, detailed measures to foster fiscal sustainability. These measures were initially projected by the authorities to put the debt-to-GDP ratio on a declining trajectory, although the combination of faltering growth perspectives and, also, expected partial implementation has required additional efforts since then. Moreover, the trajectory of the Hungarian debt ratio remains highly sensitive to macroeconomic (inflation, growth, interest rate, exchange rate) shocks and, in the context of the sovereign debt crisis, the willingness of investors to subscribe to government bonds becomes a key determinant of debt sustainability as well. Hence, the authorities should not only put the debt-to-GDP ratio on a declining path, but also ensure that a sound debt management policy reduces the sensitivity of debt sustainability to economic uncertainty.

This chapter starts by examining the current fiscal position, notably by assessing how the structural fiscal balance has evolved since the 2010 *OECD Economic Survey* (OECD, 2010). It then assesses long-term fiscal sustainability challenges in the face of macroeconomic shocks. Finally, it draws some recommendations on the future consolidation mix and structural reforms to foster the long-term sustainability of public finances.

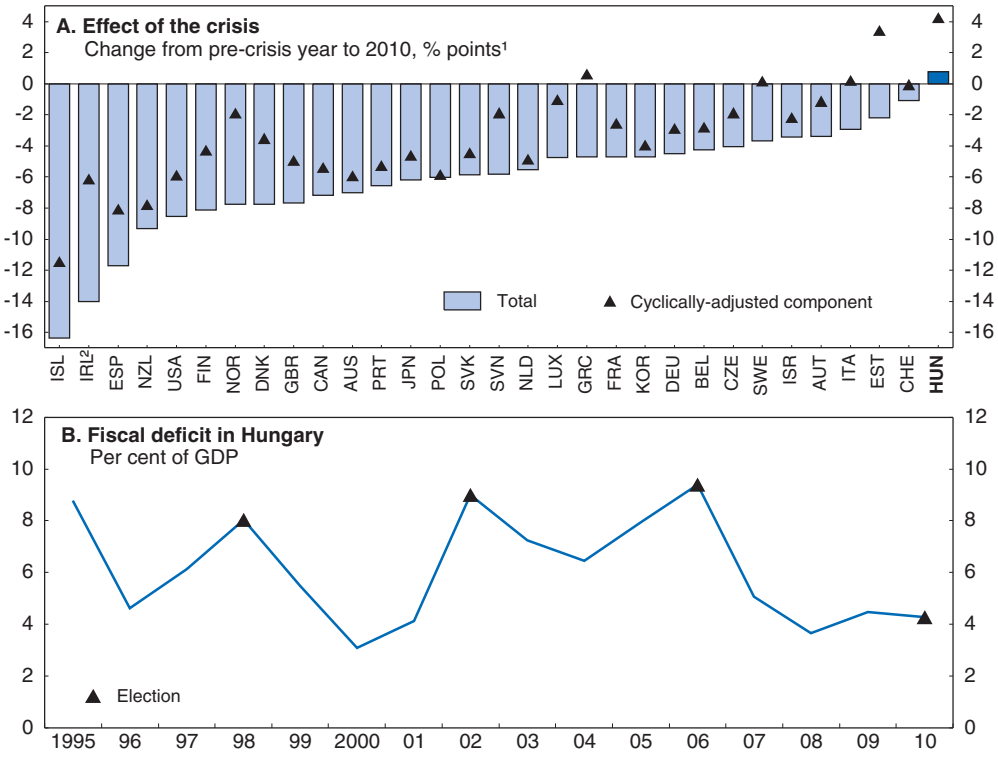
A relatively favourable fiscal position despite the economic crisis

The cyclically-adjusted deficit improved markedly since the onset of the crisis…

Despite a deep recession in 2009 and weak growth afterwards, Hungary's change in fiscal position compared well with other OECD countries. As illustrated in Figure 1.1, the headline fiscal balance has improved by 0.8 percentage point of GDP since 2007 and the cyclically-adjusted fiscal balance strengthened even more, by 4.3 percentage points, reflecting the size of the consolidation effort despite weak economic performance. It is also noteworthy that the fiscal balance kept improving in 2010 despite elections at both the national and local levels. This is a major achievement compared to previous election years (see Figure 1.1, Panel B), owing both to the adoption of a tight 2010 budget at the end of 2009 under the auspices of the EU/IMF programme and implementation of additional consolidation measures in late 2010 by the new government to compensate for revenue shortfalls and expenditure slippages (see below).

Another factor explaining the sound fiscal position despite adverse economic circumstances was the prevalence of large non-Keynesian effects in the Hungarian economy in 2009. While standard channels of fiscal consolidation hurt growth (IMF, 2010), part of these negative factors were offset by confidence effects. The credibility of the 2009 fiscal consolidation, reinforced by the backing of international organisations and a new fiscal responsibility law (IMF, 2011a; OECD, 2010), played a significant role in supporting the forint, thereby reducing the debt burden in foreign currency of households and companies in the non-tradable sector. A simulation using a DSGE model calibrated for the Hungarian economy shows that these non-Keynesian effects can be sizeable when fiscal consolidation is credible (Box 1.1).

Figure 1.1. **General government financial balances**



1. The pre-crisis year is 2006 or 2007, whichever has the highest value.
2. Excluding bank support measures of 20.2% of GDP for Ireland.

Source: OECD (2011), *OECD Economic Outlook: Statistics and Projections* (database), December.

StatLink http://dx.doi.org/10.1787/888932575807

Box 1.1. **A DSGE simulation of the macroeconomic impact of fiscal consolidation in Hungary**

The specific features of the Hungarian economy can facilitate the appearance of growth-enhancing effects of fiscal consolidation. Three non-Keynesian channels which can positively affect private consumption and investment, are modelled: *i)* expectation effects linked to a reduction in future tax liabilities; *ii)* risk premium effects driven by a lower risk default premium and interest rate induced by a cut in government debt; and *iii)* balance sheet effects stemming from a decrease in the level of debt resulting from foreign currency exposure. A DSGE model estimated for the Hungarian economy shows that, when considering expectation effects only, Keynesian effects dominate regardless of the fiscal instrument chosen. When interest rate premium effects are included as well, then the probability of a positive output reaction increases. When the previous two channels are supplemented with balance sheet effects, fiscal consolidation always leads to positive output responses if it is fully credible. The credibility of fiscal adjustment is key in achieving positive output effects. A non-credible consolidation is unlikely to generate positive output effects, regardless of the assumptions regarding specific features of the economy, and regardless of the composition of the consolidation package. Also, if inflation expectations are well anchored, non-Keynesian effects are more likely to dominate.

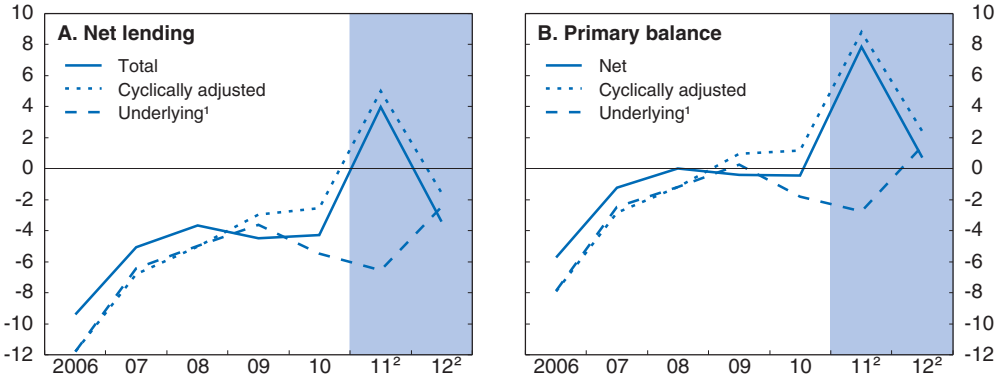
Source: Benk, S. and Z. Jakab (2012), "Non-Keynesian Effects of Fiscal Consolidation: an Analysis with an Estimated DSGE Model for the Hungarian Economy", *OECD Economics Department Working Papers*, No. 945.

... although the underlying fiscal position has significantly deteriorated recently

While the fiscal position has evolved relatively favourably since the outset of the crisis, this does not imply that such improvement is sustainable. In 2010-11, Hungary used a number of *ad hoc* consolidation measures. Considering the cyclically-adjusted balance net of such one-off measures, the fiscal stance appears to have loosened both in 2010 and 2011 (Figure 1.2). In 2011, underlying net lending is projected by the OECD to have reached a deficit of 6.5% of GDP (compared to a headline surplus of 4% of GDP), by this measure reversing *de facto* all consolidation efforts achieved since 2007. Because of a cumulative deterioration in the structural balance by almost 3% of GDP over 2010-11, in January 2012 the European Commission concluded that Hungary has not made sufficient progress towards a timely and sustainable correction of its excessive deficit.

Figure 1.2. **Cyclically adjusted and underlying fiscal balance**

General government, per cent of GDP or potential GDP



1. Cyclically adjusted less one-offs.
2. Projections.

Source: OECD (2011), *OECD Economic Outlook: Statistics and Projections* (database), December.

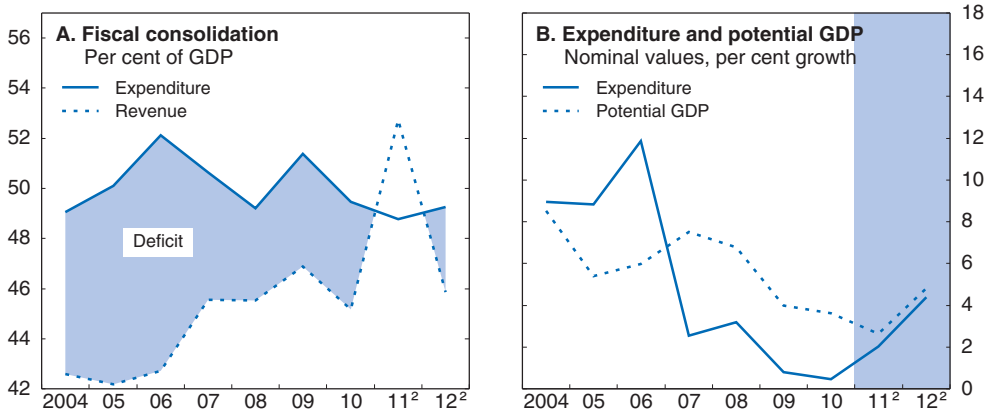
StatLink http://dx.doi.org/10.1787/888932575826

The deterioration of the underlying deficit could reflect some "adjustment fatigue" following three years of fiscal adjustment. In 2010, expenditure slippages and revenue shortfalls compared to the budget of about 1% of GDP each (European Commission, 2010a) were compensated by revenue increases of a one-off nature, such as capital transfers and the "crisis taxes". The latter included an exceptional levy on bank assets (raising about 0.7% of GDP; see also Chapter 2) and several temporary taxes on network industries (telecommunication, energy and retail sectors). In total, these taxes raised almost 1.3% of GDP in 2010 (and about the same amount in 2011). In 2011, the introduction of a flat-rate personal income tax and other tax reductions (notably applying for a full year a lower corporate income tax on small and medium-sized enterprises [SMEs] introduced in mid-2010) resulted in revenue losses estimated at around 1.8% of GDP (European Commission, 2011a). Nevertheless, exceptionally large one-off capital transfers amounting to above 10% of GDP (almost fully related to the transfer of the second-pillar pension assets to the government; see Box 1.2) switched the fiscal balance to a sizeable surplus in 2011 (Figure 1.3, Panel A). As a consequence, the headline fiscal balance will return to a deficit in 2012. However, the underlying fiscal position is expected to improve in 2012, owing to the resumption of consolidation efforts based on the Széll Kálmán plan and significant increases in revenues (see below).

Box 1.2. **Dissolution of the second pillar of the pension system**

In November 2010, the government stopped transferring social security contributions to the second pillar until the end of 2011, generating budgetary savings of HUF 420 billion (1.4% of GDP) in 14 months. In the next step, pension fund members were given slightly more than two months to decide between shifting their assets to the first pillar or keeping them in the second pillar. Ninety-seven per cent of members chose to shift their assets (around 11% of GDP) to the first pillar, generating a sizeable one-off budget surplus in 2011. The share of pension fund assets in the second pillar became low compared to the OECD average or even to some regional peers. This result reflected financial incentives. Those who opted not to transfer their assets to the first pillar were subject to a "pension tax". Despite the payment by their employers of social security contributions (24% of gross monthly earnings) to the first pillar, they did not accumulate further eligibility to a public pension and thus could lose up to 70% of their expected pension benefits. Those who did opt back into the state pillar were offered the real yield achieved on their assets (0.9% of GDP). However, the Hungarian association of private pension funds challenged this policy in the Constitutional Court, and threatened to refer the matter to the European Court of Human Rights in Strasbourg. According to policy decisions adopted in December 2011, employee social security contributions (10% of gross monthly earnings) of the remaining pension fund members were permanently redirected to the first pillar in return for eligibility to a public pension. Moreover, as the second pillar is no longer part of the mandatory pension system, its remaining members were given another possibility to return their assets to the first pillar by end-March 2012.

Figure 1.3. **Composition of fiscal consolidation**[1]



1. General government total expenditure and total revenue.
2. Projections.

Source: OECD (2011), *OECD Economic Outlook: Statistics and Projections* (database), December.

StatLink http://dx.doi.org/10.1787/888932575845

The Széll Kálmán plan: a positive step towards a more sustainable fiscal consolidation

Recognising the need for further fiscal consolidation, the government adopted the Széll Kálmán plan in March 2011, with most measures to be implemented from 2012 onwards. The plan was initially expected to result in 1.8% of GDP additional consolidation in 2012 and a further 1% of GDP in 2013 (Table 1.1). Together with additional measures laid

Table 1.1. **The Széll Kálmán plan**
Per cent of GDP, cumulative impact

	2012	2013
Total Széll Kálmán Plan	**1.8**	**2.8**
Employment and labour market	0.7	0.7
Tightening of job-seeking benefits	0.1	0.1
Wage supplement system reform	0.1	0.1
Reduction of active labour market programmes and vocational training	0.1	0.1
Other (notably reduction of social benefits)	0.1	0.1
Pension system	0.3	0.4
Tightening of disability pension eligibility	0.3	0.4
Public transport	0.2	0.2
Restructuring of MÁV	0.1	0.1
Higher education	0.0	0.1
Health care	0.3	0.4
Encouragement of generics	0.1	0.1
State and local government finances	0.1	0.4
Economies of scale at local level	0.1	0.3
Revenue increases (through the Debt Reduction Fund)	0.3	0.7
Electronic toll system	0.0	0.3
Maintain of the bank tax in 2012	0.3	0.0
Postponement of the reduction of the CIT	0.0	0.4

Source: Hungarian authorities and OECD calculations.

out in the Convergence programme, the plan was a positive step towards a sustainable fiscal adjustment with about three quarters of consolidation efforts expected to arise from expenditure restraint, which tends to be more effective than tax increases (Guichard *et al.*, 2007).

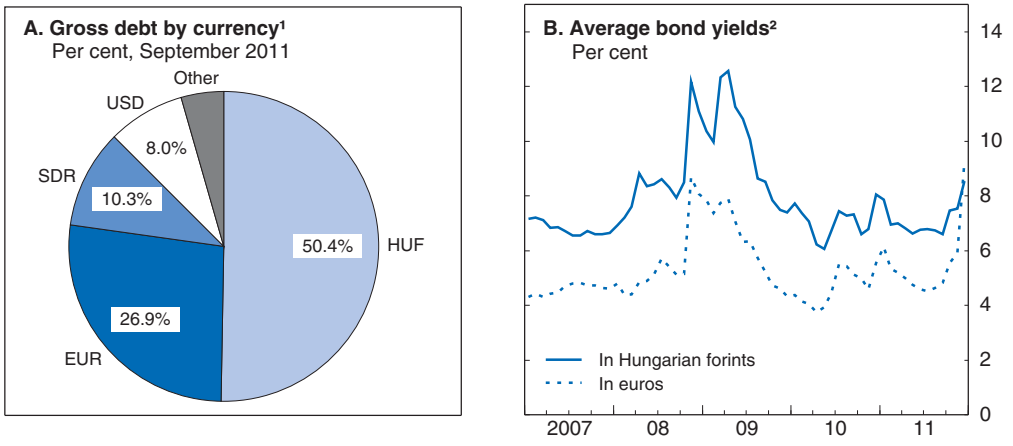
However, the deterioration of growth prospects led to the adoption of additional fiscal measures, mainly on the revenue side, notably including hikes in employees' social security contributions, increases of various excise taxes and a rise of 2 percentage points in the value added tax (VAT) rate to 27% (the highest level in the European Union). When coupled with a partial implementation of the Széll Kálmán plan, consolidation efforts based on legislated measures have become more tilted to the revenue side, with an adjustment on the expenditure side limited to slightly less than 60% in 2012 according to official estimates (Ministry for National Economy, 2011a). As a result, fiscal consolidation is expected to remain a mix of expenditure restraints and significant revenue-enhancing measures. Hence, it is crucial to ensure that expenditure growth continues to remain well below potential growth, as happened between 2007-10, to reduce the size of the government through a reduction in the ratio of expenditure to GDP over time (Figure 1.3, Panel B). The composition of spending restraint will be critical in this respect. So far, some spending measures have been less well defined (for instance the review and more efficient management of public tasks and duties) or their gains may prove to be difficult to sustain (for example the freeze in public wages or indexation of family benefits and other social transfers). The government should favour permanent measures to achieve a sustainable reduction in expenditure growth (see below).

Long-term fiscal sustainability remains highly sensitive to economic shocks

The downward debt trajectory is highly sensitive to economic shocks

If consolidation measures are implemented as planned and growth picks up, the debt-to-GDP ratio is expected to start decreasing eventually, reversing a regular increase of the Hungarian public debt since 2001 from about 55% of GDP to about 86% by end-2013 based on OECD projections. The debt ratio will however remain sensitive to temporary or permanent macroeconomic shocks. Since about half of the Hungarian debt is denominated in foreign currency (see Figure 1.4, Panel A), the debt-to-GDP ratio is particularly sensitive to fluctuations in exchange rates. A depreciation of the forint by 10% increases the gross debt-to-GDP ratio by about 3-4 percentage points. As an illustration of this point, the steep depreciation of the currency in the second half of 2011 wiped out all debt reduction efforts achieved by using part of the second-pillar pension assets to reduce the debt level (by about 5% of GDP in 2011). The interest rate on sovereign debt also represents a risk to debt payments as debt is progressively rolled-over and yields remain very volatile and high (Figure 1.4, Panel B). A rise of interest rates by 100 basis points increases the debt-to-GDP ratio by at least one percentage point after four years (Government of the Republic of Hungary, 2011). Finally, about 50% of marketable debt is held by non-residents (up from 30% in early 2000), which makes rollover risk sensitive to shifts in investors' sentiment.

Figure 1.4. **Characteristics of government debt**



1. Central government gross debt, the currency composition of the foreign exchange portfolio is before swaps (almost all non-euro bonds have been converted into euro liabilities through swaps). OECD calculations for shares of foreign exchange denominated debt based on the ÁKK *Government Securities Market, Quarterly Report, Third Quarter 2011*. SDR: Special drawing rights. The breakdown of the "Other"' category is: GBP 2.4%, JPY 1.6% and CHF 0.4%.
2. OECD calculations based on Datastream data. Average of ten-year government bonds.

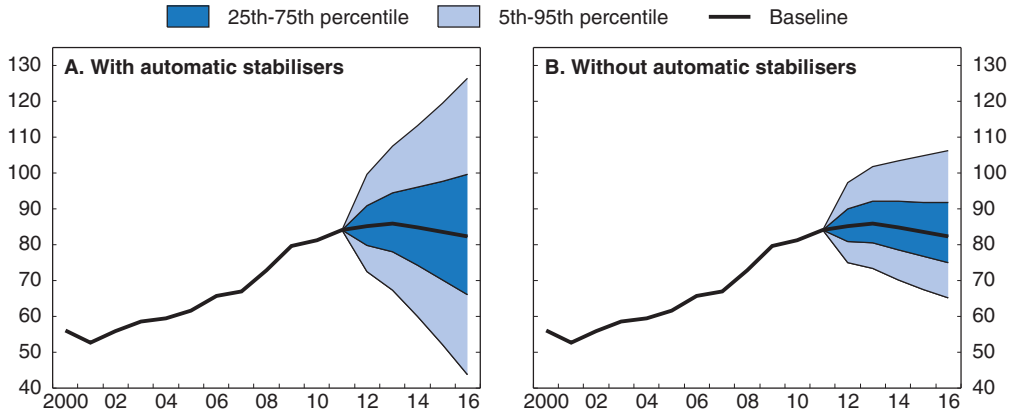
Source: Government Debt Management Agency (ÁKK) and Datastream.

StatLink http://dx.doi.org/10.1787/888932575864

To analyse the potential impact of economic shocks to debt sustainability, stochastic debt trajectories have been simulated based on past variances of macroeconomic shocks and assuming two simple alternative fiscal policy reactions, one letting the automatic stabilisers operate and the other offsetting them (see Annex 1.A1 for more details). Potential debt paths (or "fan-charts", see Figure 1.5) diverge substantially depending on whether or not the automatic stabilisers are allowed to operate. With the automatic

Figure 1.5. **Stochastic general government debt simulations**[1]

Per cent of GDP



1. The likelihood of potential debt paths are shown with their attached probability. Shocks are assumed to be of a temporary nature.

Source: OECD (2011), *OECD Economic Outlook: Statistics and Projections* (database), December and OECD calculations.

StatLink http://dx.doi.org/10.1787/888932575883

stabilisers, the range of likely debt path is quite wide, the debt path being potentially explosive in the worst case scenario (Figure 1.5, Panel A). Offsetting the impact of automatic stabilisers narrows potential debt trajectories, underscoring the benefits of not deviating excessively from fiscal targets. It should be noted, however, that there is still a non-negligible probability of 25% that the debt-to-GDP ratio could be above 90% of GDP by 2016 (Figure 1.5, Panel B), a range that is deemed to hurt growth and is likely to be unsustainable.

Long-term fiscal sustainability gaps may have worsened recently

Since 2006, Hungary's long term fiscal sustainability has significantly improved, owing to both progress in fiscal consolidation and the implementation of several pension reforms. As shown in Table 1.2, the immediate fiscal adjustment necessary to reach debt sustainability in 2009 (the so-called "sustainability gaps") became nil, or even slightly negative, based on two different indicators used by the European commission (S1 or S2). This compares with sustainability gaps of 7.9% (S1) or 9.8% (S2) in 2006. The bulk of the improvement was due to the significant improvement of the fiscal position between 2006 and 2009, which explains 6.4 percentage points out of an improvement of about 9 (S1) or 9.9 (S2) percentage points of the sustainability gaps (Table 1.2). The rest of the improvement is linked to a reduction of anticipated ageing costs, mainly due to successive pension reforms in 2006/07 and 2009.

As a consequence of pension reforms, the projected increase in gross pension expenditure by mid-century was cut by more than half from 6.7 to 3 percentage points of GDP (Table 1.3). In 2006-07, early retirement conditions were tightened by extending the minimum age and contribution period, and setting up higher pension penalties for early retirement as from 2013. In 2009, another reform raised the statutory retirement age from 62 to 65 between 2014 and 2022 and gradually increased the early retirement age from 60 to 63. Moreover, a less generous indexation rule giving a higher weight to consumer price index (CPI) inflation was established, with the Swiss formula (equal weights for inflation and wage growth) binding only for a real GDP growth rate above 5%

Table 1.2. **Sustainability indicators**

Required adjustment to the structural primary balance, per cent of GDP

	Sustainability Report		Change between 2006-09
	2006	2009	
S1 – To reach target debt of 60% of GDP[1]	**7.9**	**–1.1**	**9.0**
Given the initial budgetary position	4.5	–1.9	6.4
To reach the debt-to-GDP ratio[2]	0.3	0.4	–0.1
Given the long-term change in the primary balance due to demographic ageing	3.1	0.4	2.7
Cost of delay[3]	1.3	–0.2	. .
S2 – To fulfil an infinite horizon inter-temporal budget constraint	**9.8**	**–0.1**	**9.9**
Given the initial budgetary position	4.8	–1.6	6.4
Given the long-term change in the primary balance due to demographic ageing	5.1	1.5	3.6
Cost of delay[3]	0.8	0.0	. .
Required primary balance to ensure the sustainability of public finances under no policy change scenario	6.2	3.5	. .

1. In 2005 (2010) to reach target debt in 2050 (*2006 Sustainability Report*) or 2060 (*2009 Sustainability Report*).
2. In 2050 (*2006 Sustainability Report*) or 2060 (*2009 Sustainability Report*).
3. Increase in the sustainability indicators due to a five year delay in implementing budgetary consolidation compared to the baseline.

Source: European Commission (2009), *Sustainability Report 2009*, *European Economy*, No. 9; European Commission (2006), *The Long-term Sustainability of Public Finances in the European Union*, *European Economy*, No. 4.

Table 1.3. **Projected change in gross age-related expenditure/GDP ratio and contributing factors**

Per cent of GDP

	Public expenditure (% of GDP)	Contributions in % points – impact of changes in:					Change in % points (by)
		Pension	Health care	Long-term care	Unemployment benefits	Education	
2006 Ageing Report	21.2 (2004)	6.7	1.0	0.6	–0.0	–0.7	7.6 (2050)
2009 Ageing Report	21.6 (2007)	3.0	1.3	0.4	–0.1	–0.4	4.1 (2060)

Source: European Commission (2006), *The Long-term Sustainability of Public Finances in the European Union*, *European Economy*, No. 4; European Commission (2009), *2009 Ageing Report: Economic and Budgetary Projections for the EU-27 Member States (2008-2060)*, *European Economy*, No. 2.

and a full indexation to prices for a real GDP growth rate below 3%. Finally, the payment of a 13th month pension was abolished and replaced by a pension premium subject to tighter conditions for eligibility (see also OECD, 2010).

While the improvement in long-term fiscal sustainability is significant, it should not lead to complacency. The recent deterioration of the underlying deficit may signal a weaker fiscal position than assumed in the *2009 Ageing Report*, especially if new consolidation measures are not implemented as planned or further deterioration occurs from 2012 onwards. Sustainability gaps are highly dependent on growth assumptions, and since the last calculations by the European Commission in 2009, any new estimates are likely to be based on much less favourable growth assumptions (see discussion on potential growth perspectives in the Assessment and recommendations). The dissolution of the second pillar of the pension system in 2011 (see Box 1.2) reduced fiscal sustainability as the transfer of implicit pension liabilities to the state pillar was not fully offset by an equivalent cut in the public debt as part of the assets was used to finance current expenditure. Out of about 11% of GDP of transferred assets, around 5% of GDP held in government bonds led to an immediate

reduction of public debt, 0.9% of GDP were used to pay real yields to those having transferred their pension assets to the first pillar, and 2% of GDP was spent to cover the deficit in the first pillar of the pension system. The authorities had also planned to assume the debt of two public transport companies (1.4% of GDP) and buy out selected public-private-partnership projects (0.7% of GDP), but have done so to a very limited extent for the debt of public transport companies (0.2% of GDP). In order not to further worsen fiscal sustainability, it is crucial that all remaining pension assets are used to reduce public debt. On the other hand, a planned taxation of new pensions from 2013 is expected to lead to a decrease in the level of net pension expenditure by 0.5 percentage point of GDP (European Commission, 2010b). Other parametric changes in the first pillar of the pension system have also contributed to an improvement of fiscal sustainability (see below).

Achieving more progress towards fiscal sustainability

Reducing the impact of economic shocks on public debt

The global financial crisis has put the resilience of the debt management strategy of many OECD countries to a test. Hungary has not been an exception and the operational response of its debt managers to the crisis has involved three main dimensions: *i*) changing the mix of instruments; *ii*) adapting the issuance techniques; and *iii*) stepping up market management operations (Table 1.4). The transfer of most of the second-pillar pension assets to the first pillar has also influenced debt management, since it reduced debt roll-over requirements. Nevertheless, several unsuccessful debt auctions at the end of 2011 demonstrated the persistence of debt management challenges in the context of heightened sovereign debt tensions. The government requested a new financial support from the EU and IMF in mid-November 2011.

Table 1.4. **Hungary: debt management responses to the crisis**

Measures taken since 2009

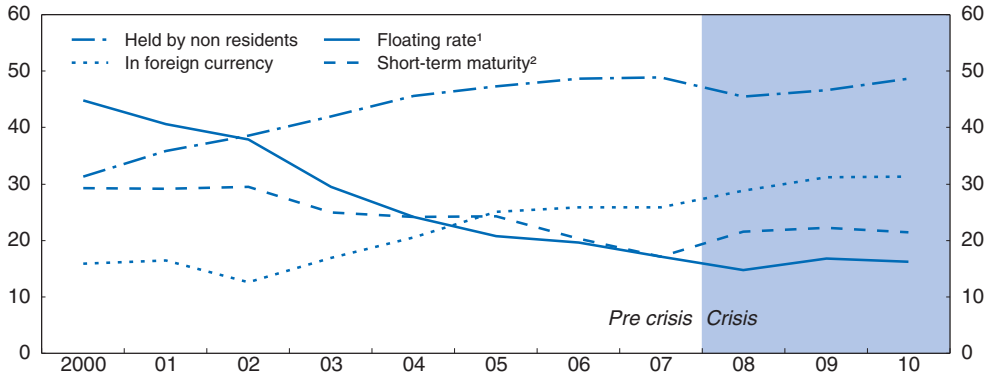
Instruments mix	Issuance technique	Market functioning	Other
Increased proportion of foreign exchange loans	More flexibility in the auction calendar	More frequent buy-back auctions	Introduction of direct and regular meetings with investors
Introduction of floating-rate notes	More flexibility in the amounts offered	More frequent reopening/taps of off-the-run bonds	Diversification of investors
New inflation-linked instrument	Introduction of a non-competitive auction facility	. .	. .

Source: IMF (2011), "Managing Sovereign Debt and Debt Markets through a Crisis – Practical Insights and Policy Lessons", *IMF Policy Paper*, International Monetary Fund, April and Hungarian authorities.

The effect of recent adjustments in debt management practices on the vulnerability of Hungarian debt has been mixed. On the positive side, more frequent issues of "off-the-run" bonds (*i.e.* bonds that are no longer considered as benchmarks) helped smooth the market. The introduction of an inflation-linked instrument and direct and regular meetings with investors were also positive innovations. However, the share of marketable debt with a short maturity has started increasing again and the share of debt sensitive to short-term variation of interest rates has stopped declining, reversing earlier trends (Figure 1.6). In parallel, marketable debt subject to exchange rate risks has kept increasing and debt held by non-residents remains high (Figure 1.6). The near elimination of the second pillar also increases risk if it reduces the depth of the Hungarian capital market, which could force the government to borrow even more from non-residents, most likely in foreign currency.

Figure 1.6. **Evolution of debt risk indicators**

Marketable debt instruments in per cent of total marketable debt



1. Treasury bills, index-linked bonds and variable rate notes.
2. Money market instruments and short-term bonds.

Source: National authorities.

StatLink http://dx.doi.org/10.1787/888932575902

The first challenge for the debt management agency is to ensure that its main official objective – reducing debt issuing costs while minimising risks – remains based on a up-to-date optimal portfolio model to help define the appropriate mix of instruments (*e.g.* foreign exchange (FX) *versus* domestic currency; floating *versus* fixed-rate, short-term *versus* long-term maturity; see OECD, 2005). Optimal portfolio (or cost-at-risk) models are usually calibrated on historical outcomes and are likely not to be valid for an event as extreme as the current crisis. Also, some models tend to focus on a limited range of risks (*e.g.* the maturity structure) or model risks independently, abstracting from an analysis of the underlying macroeconomic framework (IMF, 2011b). In the case of Hungary, it is difficult to judge the relevance of the cost-at-risk model for the current crisis since its features are not public. Only the main benchmarks given by the model are public (ÁKK, 2010). On this basis, the share of loans in FX seems to be excessive once EU/IMF loans are taken into account: at more than 50%, it is well above the optimal range of 25-38% currently given by the model. Consequently, the planned reduction of the share of the debt in foreign currency should be pursued (Government of the Republic of Hungary, 2011). A recalibration of the main parameters of the model based on the experience of the current crisis should be done as soon as sufficient historical data are available and the optimal size of borrowing in FX adjusted in this light. To ensure greater transparency, the main features of the debt management risk model and its underlying assumptions could be made public.

Improving debt management also requires a smooth functioning of the market. The government should encourage the development of third-pillar pension funds (see also Chapter 3) to promote a deeper domestic capital market, which would help maintain a significant share of resident subscribers in domestic currency to avoid an excessive reliance on non-resident buyers. A smooth functioning of the primary bond market could also be fostered by putting into competition primary dealers by making their accreditation conditional every year on good performance, based on clear and public criteria. More generally, communication with stakeholders and investors should be strengthened to understand better their needs and avoid the failed or partially failed auctions as happened at end-2011, while the size of liquidity buffers necessary to sustain a temporary loss of market access could be increased.

Another challenge is to guarantee efficient co-operation between debt management, fiscal policy and monetary policies to get a full perception of risks and ensure consistency of policies. While the current institutional set-up seems appropriate (both the Ministry for National Economy and the central bank have a seat at the board of the debt management agency), it would be advisable to complement it with instruments that help internalise debt management externalities on fiscal or monetary policies (BIS, 2011). In particular, the development of inflation-indexed bonds is welcome, and would reinforce monetary and fiscal policy co-operation as they would act as a strong incentive for the government to reduce the inflation rate.

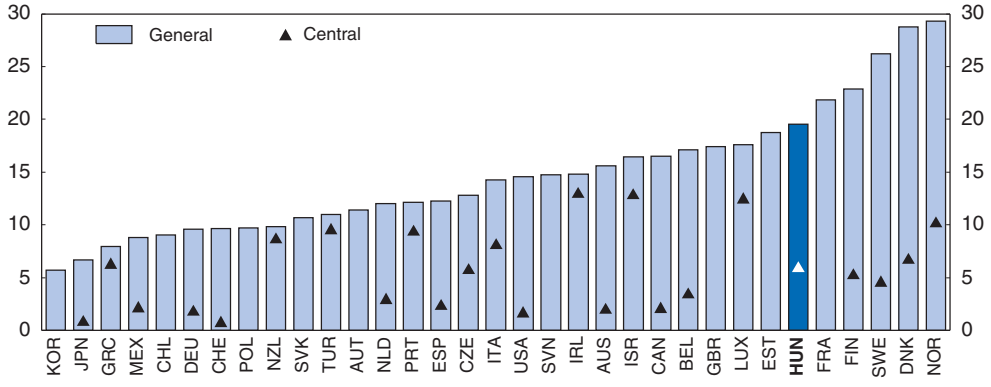
Improving the future consolidation mix

Sustainably curbing expenditure

Structural reforms to enhance public sector efficiency can promote sustained spending restraint (OECD, 2010). At around ¾ million, the overall number of public sector employees is high, representing around 20% of the labour force (Figure 1.7). A planned restructuring of local governments provides an opportunity to reap economies of scale and improve the division of labour between the central and sub-national governments, notably through an expected introduction of a task-based financing system in 2013. The government took measures to reduce public employment at end-2011. However, it is important that dismissals of civil servants fully comply with best practices in this area. Following a law passed in late 2010, the government had been allowed to operate lay-offs without justification and this practice was declared unconstitutional by the Constitutional Court and the government amended the law accordingly. Redundancies should occur following a prior assessment of staff performance.

Figure 1.7. **Government employment**

Per cent of labour force, 2008[1]



1. 2006 for Portugal.

Source: OECD (2011), *Government at a Glance 2011*.

StatLink http://dx.doi.org/10.1787/888932575921

Public procurement is another area where important savings could be made. In 2008, general government and state-owned utilities' procurement represented 20% of GDP, three percentage points above the OECD average. The government adopted in mid-2011 a new act on public procurement to simplify the legal practice and favour a higher participation of small and medium-sized enterprises. At the same time, grounds for exclusion from the

public procurement process have been extended to offshore companies (or companies in which a participation of an offshore entity exceeds 25%) and to firms failing to comply with tax regulations. Yet a greater opening of national procurement markets to foreign suppliers would reduce costs by creating conditions to reap the benefits of enhanced competition. In 2008, a quarter of announced tenders were advertised internationally, a share above the OECD average, but best-performing OECD countries (Estonia and Poland) had shares close to 40%. Competition and transparency could also be fostered through a greater use of information and communication technologies in the procurement process. Most OECD countries have developed one-stop-shop facilities (single-entry procurement websites) or several websites depending on the type of purchase or operation/transaction. However, such solutions are underdeveloped in Hungary (OECD, 2011a). Finally, it remains to be seen to what extent the new act will mitigate the risks of corruption given Hungary's poor showing in this area and the need to strengthen the monitoring of procurement procedures (OECD, 2010).

There are significant potential efficiency gains as the organisation of public transport is generating losses. It has been rightly identified in the Széll Kálmán plan as an area where savings could be achieved by restructuring the organisation of the bus and railway companies (Volán and MÁV). While projected savings were estimated at almost 0.3% of GDP over the period 2012-13, the government had to increase support for public transport companies by almost 0.1% of GDP in 2012. On top of that, in 2011 it bailed out several times the chronically unprofitable state-owned airline company Malév, which had benefited from significant state support in the past (estimated at 0.3% of GDP). The company went bankrupt early in 2012. On the other hand, the financing of public transport has been improved with higher than planned cuts in price subsidies in 2012. More generally, any other bailouts of the transport companies should go in tandem with a hardening of their budget constraint and, even if this could be politically difficult to implement, a reduction in service provision. Moreover, there is a need to open those sectors to competition and privatisation to reduce pressure on public expenditure and improve governance and efficiency.

Increasing tax revenues using the least distortive taxes

As the authorities may need to resort to taxation to achieve their consolidation goals, they should do so by raising the least distortive taxes. Measures taken so far are mixed in this regard. The recent increase in VAT is favourable in this respect. But the "crisis taxes" are highly distortive, in particular the bank tax (see Chapter 2), and should be removed as quickly as possible and no later than the end of 2012 or 2013 (bank tax) as planned. Only limited increases of environmental taxes have been implemented, although several avenues exist to raise environmental taxation (OECD, 2010).

Property taxes (notably on immovable property, net wealth, inheritances and legal transactions) are still low as they raised around 1% of GDP in 2008, compared with an OECD average of nearly 2% of GDP. Recurrent residential property taxation is an under-exploited source of revenue in Hungary, especially as it is relatively growth friendly (Arnold *et al.*, 2011). Only 0.3% of GDP was raised in 2008, against an OECD average of 1% of GDP and close to 3% of GDP in Canada, the United Kingdom and the United States. A recurrent tax on immovable property that was to be raised at the central level was cancelled by the Constitutional Court in 2010. In 2011, the authorities had been debating whether to allow local governments to raise such taxes up to 3% of the market value from 2012, but this proposal was not implemented.

More reliance on recurrent residential property taxation for fiscal consolidation would require addressing two challenges (OECD, 2011b). *First*, the intergovernmental fiscal framework would have to be adapted. As the tax accrues to local authorities, the government should take advantage of the reform to reduce the value of transfers from the state budget to local authorities' budgets. Otherwise, property tax revenues would need to be more centralised or levied on the state level. *Second*, there is strong political resistance to increasing that type of highly visible and difficult to avoid tax. Property taxes tend to be regressive, which can be tackled by providing income-related reliefs to lower the burden on the poorest households. For liquidity-constrained individuals or households, who are income-poor/house-rich, a reverse-mortgage system would allow them to honour their payments without having to leave their homes, but would require a careful financial supervision at the same time.

Strengthening tax collection is another challenge. The merger in January 2011 of two tax authorities (the Tax and Financial Control Administration and the Customs and Finance Guard) and the creation of a single institution (the National Tax and Customs Administration) is a step in the right direction. Additionally, the powers and procedures of the new institution were enhanced in January 2012, including pre-registering of new firms, checking individual transactions and establishing a new database to identify risky taxpayers. It is important to implement stronger penalties and financial sanctions to make tax compliance effective. Supported by better inter-agency data sharing, tax controls should be also reinforced at the top and the bottom of the income distribution as more than one million workers report earning the minimum wage (representing a third of total employment) according to annual tax record data. There is also evidence that income underreporting is higher among the self-employed than among employees in Hungary, with the former concealing around two-thirds of their income (Benedek and Lelkes, 2011).

Ensuring a fair burden sharing of consolidation is also key for its public acceptance

Successful fiscal consolidation requires fair sharing of adjustment efforts between the rich and the poor to foster public acceptance and ensure the sustainability of tax reforms. Notwithstanding the government's motivation to improve economic efficiency through tax reforms, this issue is all the more pressing in Hungary because recent fiscal reforms have shifted the tax burden towards low-income earners. On the revenue side, across-the-board hikes in social security contributions and the removal of the employment tax credit significantly increased the tax wedge on households at the low-end of the income distribution (Chapter 3), especially for those without children (Figure 3 in the Assessment and recommendations). The rise in the standard VAT rate (the reduced rates have remained unchanged), while limiting economic distortions, tends to affect low-income earners more as they spend relatively more of their income on consumption. On the expenditure side, a freeze in social benefits has been more detrimental to the poorer. Tax expenditures introduced along with the flat tax for families with children rise with the level of income, with a gearing down in overall income gains for those in the highest income decile (MNB, 2010).

There are options to adjust burden sharing while retaining the efficiency aspects of the recent reforms, but all such measures would need to be carefully considered in the light of the need to reduce the fiscal deficit and ensure longer-term fiscal sustainability. Reinstating the recently removed employment tax credit would both provide income to low-income earners and enhance work incentives. The fiscal cost could be lowered by phasing it out from a lower income level than was previously the case. A tax-free allowance in the personal income tax system would provide relief at the low end while maintaining

the overall flatness of the tax structure. Cancelling current plans to lower the effective income tax rate to 16% for those earning above the average wage would be another option to preserve progressivity. A significant number of social benefits are means tested (social assistance, housing benefit, etc.), thus linking child-related benefits to income rather than, as now, only the number of children would also steer more money to the needy. All the more as the effectiveness of tax allowances on the fertility rate is low and they negatively affect budget revenues by curbing the employment rate of women (see Chapter 3). Finally, raising the least distortive property taxes on affluent individuals would create fiscal space for the restructuring of foreign currency loans of distressed borrowers (Chapter 2).

Tackling long-term pressures on public spending of population ageing

Hungary faces rapid population ageing and, despite significant past pension reforms, a rise in the cost of ageing is expected by 2060. A first avenue to reduce the increase would be to raise the statutory retirement age in line with gains in life expectancy. Despite a rise in the legal retirement age from 62 to 65 by 2022, the gap with projected life expectancy will widen for men from 8.4 years in 2010 to 9.3 years in 2025 and reach 16.9 years in 2060 (European Commission, 2011b). The expected gap will be even higher for women, amounting to 16.4, 20.6 and 22.4 years, respectively. In a defined-benefit system, raising the retirement age would favour an extension of the working life and prevent further increases in net pension wealth linked to higher expected years in retirement.

Based on the prospective effects of pension policies, future Hungarian pensioners could have expected to enjoy relatively high levels of net pension wealth in 2008, defined as the present value of the lifetime flow of pension benefits (OECD, 2011c). Calculations presented below are for workers who enter work at age 20 and contribute to the pension system each year until the age of exit from the labour market. It is also assumed, among other things, that the investment performance of the Hungarian mandatory fully-funded pension sector would have converged to the OECD's assumption of a net real return of 3.5% per year. However, these estimates did not take into account the effects of the 2009 pension reform and those of the dissolution of the second pillar in 2011. With this as a background, at above nine times annual gross earnings, the level of net pension wealth accrued for men with average earnings at age 60 could have ranked Hungary in the highest third group of OECD countries. Net pension wealth could have become even higher for women, representing 11.5 times the annual gross earnings and was two percentage points higher than the OECD average. On a different measure, net pension replacement rates of average earners could have come close to 105% (with close to 60% stemming from the first pillar) against an OECD average of slightly below 70% in 2008 (OECD, 2011c). The dissolution of the second pillar is likely to have incidentally reduced the overall expected replacement rate by 20%, under the OECD's standard assumptions of 2% annual growth in real average earnings and a 3.5% rate of return on investments net of administrative charges per year (OECD, 2012), which would bring the overall net replacement rate to close to 85%. Nevertheless, the historical performance of Hungarian mandatory pension funds between 1998 and 2010 was weak (see Chapter 2) and a neutral rate of investment return would need to be equal to wage growth minus 1.5% per year over lifetime contribution years to cancel any favourable impact on replacement rates of the second pillar in comparison with the first pillar (OECD, 2012). Against this background, there is still room to further reduce replacement rates. This could be achieved by making all pension benefits liable to the personal income tax as is the practice in most OECD countries. As from 2013, only newly

granted pensions will be calculated from gross earnings and subject to the personal income tax (even though detailed tax rules have not been defined yet). Another possibility to reduce replacement rates and contain rises in public expenditure would be to shift valorisation of past earnings from wages to prices (or a combination of the two).

Another avenue for reform is to significantly restrict access into different early retirement pathways, as the authorities started doing in 2011. Early retirement options in the general pension regime were eliminated, except for women who are allowed to retire after forty years of contributions. Restricting eligibility to other early retirement schemes would also boost the employment rate of older workers and reduce spending. In 2011, Parliament adopted legislation stating that any pension granted before reaching the legal retirement age may be reduced by subjecting it to personal income tax, transformed into a social benefit (subject to indexation rules) or even terminated for beneficiaries finding employment. From 2012, the level of new and existing retirement benefits of special pension regimes (up to the statutory retirement age) will be reduced by an amount equivalent to the income tax. However, detailed legislation effectively cancelling eligibility conditions for early retirement privileges of law enforcement officers (policeman, fire-fighters, border guards, and customs officers), miners, chemists or artists has not yet been implemented. Parliament also passed a bill that lowered the retirement age for judges and prosecutors to 62 from the current 70, effective from January 2012. Closing pathways into early retirement for women and phasing out all special pension regimes should remain a priority not only from fiscal, but also labour market perspective.

Adequate fiscal rules could help maintain the fiscal adjustment effort

Significant changes were made to the fiscal responsibility law in 2010 and 2011 as opposed to the recommendation from the last *Survey* to allow a minimum implementation before doing so. The government adopted a debt ceiling in the Constitution stipulating that gross public debt should eventually be cut below 50% of GDP year after year, backed by a debt rule enshrined in a new cardinal law (subject to a two-thirds majority to be changed) on economic stability adopted in late December 2011, which repealed the law on fiscal responsibility. The debt rule stipulates that public debt can increase only by expected inflation minus half of expected real GDP growth, as long as the debt-to-GDP ratio is above 50%. However, this rule will come into force only in 2016, while the targets of the Convergence programme of 2011 will apply in the meantime.

The new fiscal framework could be improved. The escape clause dealing with economic contingencies ("significant and enduring national recession") may be too restrictive since the rule could turn out pro-cyclical in some instances: for example, this could happen when economic growth is positive but the output gap still negative. Relating the growth in public debt to the level of the output gap would enhance counter-cyclicality. The definition of the debt under the rule is close to the Maastricht definition, but does not fully coincide with it (Ministry for National Economy, 2011b). This introduces potential confusion, widens the scope for accounting gimmickry, reduces transparency, and could significantly undermine the credibility of the debt rule through further revisions of the domestic definition. Therefore, the definition of public debt should be made strictly identical with the Maastricht definition. Besides, as the debt rule is defined in gross terms, it could act as an incentive to sell various public assets to reduce gross debt, although it may not be optimal for fiscal sustainability if losses in asset revenues are higher than gains in debt servicing costs. To avoid this, debt policy options should be supported by systematic

cost-benefit analysis, whose conclusions and assumptions should be made public. More broadly, the public acceptance of the debt rule should be bolstered by removing the stipulation that most prerogatives of the Constitutional Court in economic matters are suspended as long as the debt ratio is above 50% of GDP.

The efficiency of the fiscal framework could be further enhanced by effectively switching into a multi-year budgeting framework, with medium-term deficit targets supported by realistic growth projections and detailed measures to achieve the targets. In April 2011, the publication in the Convergence programme of conservative and dynamic paths over the period 2011-15 represented a welcome step in this direction. Moreover, to strengthen fiscal discipline, the new law on economic stability subjects changes to a two-thirds majority in Parliament of some regulations of the tax system (*e.g.* adoption of a flat-rate taxation of personal income from 2013 and corporate income from 2015; the amount of family tax benefit per child depends on the number of children and cannot be lower than in the previous year; employers' social security contributions are no longer a base for future claims on social security benefits), pension system (*e.g.* pension levels are guaranteed in real terms) and budget management (*e.g.* Parliament is not allowed to pass any budget bill or budget amendment without an approval of the fiscal council). Yet such provisions are likely to unduly restrict needed flexibility in the future.

Local governments were behind a significant increase in the deficit in 2010. Following a law from 1990, local governments in Hungary face loose fiscal constraints with a theoretical debt limit defined as the perpetuity value of 70% of own resources reduced by short-term liabilities. Moreover, there is no restraint on the path of reaching the debt ceiling, which can lead to excessive deficits in the case of low indebtedness (Baksay and Kiss, 2009). The new constitution has subjected the borrowing of local governments to a prior approval of the government and the new law on economic stability stipulates that financial liabilities stemming from debt repayment obligations of local governments shall not surpass 50% of their own revenues. The authorities have also started to progressively centralise expenditure on health and education and intend to implement a task-based financing system for local governments. Instead of direct government control, it would be advisable to improve the fiscal rules at the local level. The most common fiscal rule for sub-central governments in OECD countries is a budget balance requirement (mainly in terms of annual budgets) often coupled with a restriction on borrowing and limits on tax autonomy (Sutherland *et al.*, 2005).

The fiscal framework was weakened with the dissolution of the previous high-profile fiscal council created by the 2008 fiscal responsibility law. The council was replaced by a new one composed of three members: a chairman of the council, the governor of the central bank, and the head of the state audit office. It has a restricted mandate to assess the state budget and support Parliament's legislative activities, but on the other hand it has been granted an extraordinary unlimited power to veto budget laws. This opens the possibility for the President to dissolve Parliament if it fails to pass a budget by the end of March if two out of three members consistently reject the bill. This power given to an independent institution staffed by only three persons over an elected Parliament is unique and, beyond democratic considerations, is clearly excessive due to the lack of resources (both in terms of budget and staffing) to do a proper analysis of the budget and fiscal policy. A more effective institution would need more resources (its own analytical staff or an inter-institutional committee of experts) and an enlarged mandate to assess, on an ongoing basis, the consistency of fiscal policy with the fiscal framework. At the same time, it should lose its veto power. To be credible, the council needs to be, and to be seen to be,

independent from government, and its analyses should be widely disseminated. Also, the fact that one member of the fiscal council can only be replaced if two-thirds of Parliament can agree on a new candidate risks further undermining its credibility in case of political gridlock.

Box 1.3. **Recommendations on ensuring debt sustainability amid strong economic uncertainty**

Improving debt management to address heightened economic uncertainty

- To insure against immediate risks of sudden capital outflows and rollover of public debt, conclude an agreement with multilateral organisations.
- To reduce medium-term risks, start reducing significantly the exposure to foreign exchange loans and increasing debt maturity. Update the optimal portfolio model by taking into account new risks identified during the crisis.
- To smooth issuance in forint and reduce its cost, increase the pool of potential subscribers by developing the third pension pillar. Increase competition among primary dealers by making their accreditation dependant on performance criteria.
- To foster consistency between fiscal, monetary and debt management policies, develop inflation-indexed bonds and use systematic cost-benefit analysis when reducing the gross debt level by using public assets and make the assessment (together with underlying assumptions) public.

Fostering fiscal position by improving the consolidation mix

- Increase the efficiency of public transport companies and make any additional financing conditional on credible consolidation and restructuring plans.
- Continue staff reductions at all levels in the public sector to foster efficiency gains.
- Continue shifting the tax system towards the least distortive property and environmental taxes. In particular, increase taxes on immovable property after ensuring that their tax base is closely linked to market values. The crisis taxes should be swiftly eliminated and no later than at the end of 2012 or 2013 (bank tax) as planned.
- Ensure a balanced distributional impact of fiscal consolidation by means testing child-related benefits, reinstating the employment tax credit, adopting a tax-free allowance in the personal income tax system, cancelling plans to cut the effective personal income tax rate for above-average earners, and raising the least distortive property taxes on affluent individuals.

Tackling long-term pressures on public spending of population ageing

- Make pension benefits liable to personal income tax and shift from wage to price-valorisation of past earnings (or a combination of the two).
- Continue to close pathways into early retirement of special pension regimes, notably retirement privileges of law enforcement officers, miners, chemists and artists.

Enhancing the fiscal framework

- To raise the profile of the fiscal council, it would be more useful to devote greater resources (own analytical staff or an inter-institutional committee of experts) and enlarge the mandate to assess, on an ongoing basis, the consistency of fiscal policy with the fiscal framework, instead of keeping the veto power.
- To reduce the incentive to use one-off measures to meet fiscal targets and reduce the pro-cyclical bias of the new debt rule adopt a multi-year budgeting approach, with medium-term deficit targets supported by realistic growth projections and detailed measures to achieve the targets.
- Increase the public acceptance of the debt rule by cancelling the principle linking the powers of the Constitutional Court to the level of the debt ratio.

Bibliography

ÁKK (Államadósság Kezelő Központ) (2010), *Government Debt Management Report 2010*, Government Debt Management Agency.

Arnold, J., B. Brys, C. Heady, Å. Johansson, C. Schwellnus and L. Vartia (2011), "Tax Policy for Economic Recovery and Growth", *The Economic Journal*, Vol. 121, No. 550.

Baksay, G. and G. Kiss (2009), "Act One, Act First – The Law on Fiscal Responsibility", *MNB Bulletin*, Magyar Nemzeti Bank, May.

Benedek, D. and O. Lelkes (2011), "The Distributional Implications of Income Under-Reporting in Hungary", *Fiscal Studies*, Vol. 32, No. 4.

BIS (Bank for International Settlements) (2011), "Interactions of Sovereign Debt Management with Monetary Conditions and Financial Stability", *CGFS Papers*, No. 42, Committee on the Global Financial System, BIS.

European Commission (2010a), "European Economic Forecast – Autumn 2010", *European Economy*, No. 7.

European Commission (2010b), "Hungary: Macro Fiscal Assessment", ECFIN/Ares(2010) 177831, DG Economic and Financial Affairs, European Commission, April.

European Commission (2011a), "Assessment of the 2011 National Reform Programme and Convergence Programme for Hungary", *Commission Staff Working Paper*, SEC(2011) 725 final, European Commission.

European Commission (2011b), "The 2012 Ageing Report: Underlying Assumptions and Projection Methodologies", *European Economy*, No. 4.

Government of the Republic of Hungary (2011), *Convergence Programme of Hungary 2011-2015*, April.

Guichard, S., M. Kennedy, E. Wurzel and C. André (2007), "What Promotes Fiscal Consolidation: OECD Country Experiences", *OECD Economics Department Working Papers*, No. 553, OECD Publishing.

IMF (International Monetary Fund) (2010), "Will it Hurt? Macroeconomic Effects of Fiscal Consolidation", *World Economic Outlook*, IMF.

IMF (2011a), "Hungary: Ex Post Evaluation of Exceptional Access Under the 2008 Stand-By Arrangement", *IMF Country Report*, No. 11/145, International Monetary Fund, June.

IMF (2011b), "Managing Sovereign Debt and Debt Markets through a Crisis – Practical Insights and Policy Lessons", *IMF Policy Paper*, International Monetary Fund, April.

Ministry for National Economy (2011a), "Report on the Measures Taken in Response to Council Recommendation of 7 July 2009 under Article 126(7) of the Treaty", December.

Ministry for National Economy (2011b), *Measures to Attain the Sustainable Reduction of Public Debt*, Ministry for National Economy, October.

MNB (Magyar Nemzeti Bank) (2010), *Quarterly Report on Inflation*, MNB, November.

MNB (2011), *Public Finance Review – Analysis of the 2012 Budget Bill*, Magyar Nemzeti Bank, October.

OECD (2005), *Advances in Risk Management of Government Debt*, OECD Publishing.

OECD (2010), *OECD Economic Surveys: Hungary 2010*, OECD Publishing.

OECD (2011a), *Government at a Glance 2011*, OECD Publishing.

OECD (2011b), "The Taxation of Residential Property: Background Note", *Internal Working Document*, Centre for Tax Policy and Administration.

OECD (2011c), *Pensions at a Glance 2011: Retirement-income Systems in OECD and G20 Countries*, OECD Publishing.

OECD (2012), "Reversals of Systemic Pension Reforms in Central and Eastern Europe: Implications for Pension Benefits", in *OECD Pension Outlook 2012*, forthcoming.

Sutherland, D., R. Price and I. Joumard (2005), "Fiscal Rules for Sub-central Governments: Design and Impact", *OECD Economics Department Working Papers*, No. 465, OECD Publishing.

ANNEX 1.A1

A stochastic approach to Hungarian debt sustainability

The methodology used to run stochastic debt simulations follows di Giovanni and Gardner (2008). This is a simplified version of more sophisticated stochastic methods to analyse debt sustainability: instead of directly simulating stochastic debt paths, confidence intervals are built around a baseline scenario by applying random shocks to the debt accumulation equation. The baseline scenario is derived from the *OECD Economic Outlook* (OECD, 2011) until 2013, and is then built by assuming a fiscal primary balance consistent with a proposal by the European Commission that the debt ratio declines by 1/20th each year as long as it is above 60% of GDP and with macroeconomic projections in line with the OECD medium-term analysis. The main differences from di Giovanni and Gardner (2008) lie in the introduction of random shocks to the exchange rate and the comparison between two alternative simple fiscal policy reactions, including a feedback impact on activity (see below). Each shock is constructed as the first difference of the quarterly variable *x*:

$$\varepsilon_q^x = x_q - x_{q-1}$$

The following tables summarise the volatility of shocks over the period 2002-11 and the correlation between different variables, which is consistent with stylised facts.

Table 1.A1.1. **Standard deviation of shocks**

2002-11

	Standard deviation of shocks (quarterly)	Standard deviation of shocks[1] (annualised)	Average value of variables (annual)
Nominal GDP growth	3.03	6.05	7.03
Interest rate in HUF	1.00	2.00	7.77
Interest rate in EUR	0.85	1.71	4.62
Exchange rate (1 EUR = n HUF)	14.32	28.60	259

1. Annualised standard deviations of shocks are assumed to be twice as big as quarterly deviations.

Table 1.A1.2. **Correlation of shocks**

2002-11

	Growth	Interest rate in HUF	Interest rate in EUR	EUR/HUF exchange rate
Growth	1	. .	. .	. .
Interest rate in HUF	–0.14	1	. .	. .
Interest rate in EUR	–0.15	0.48	1	. .
EUR/HUF exchange rate	–0.02	0.50	0.52	1

The Monte Carlo simulation is done through the following steps. *First*, a random vector of quarterly shocks is drawn over 2012-16. These shocks are jointly-normally distributed with zero mean and a variance/covariance matrix identical to those of historical shocks. *Second*, these shocks are added to get an annual innovation to the respective variables: growth, interest rates in the two main currencies of public debt (HUF and EUR) and exchange rate. Shocks to the interest rate are applied assuming an average maturity of debt in domestic currency and foreign currency (euro) of respectively five and ten years. Finally, the above step is repeated 100 times to extract the 5th, 25th, 75th and 95th percentiles and construct a fan chart of the debt path. The formula to obtain the shocks is as follows:

Annual shocks on growth and exchange rate: $\varepsilon_t^x = \sum_{q=1}^{4} \varepsilon_q^x$

Annual shocks on interest rate: $\varepsilon_t^r = \frac{1}{T} \sum_{y=2012}^{t} \sum_{q=1}^{4} \varepsilon_{q,y}^r$ with T = 5 for HUF and T = 10 for EUR

The shocks are applied to the debt accumulation equation in two different ways. The first is to assume temporary shocks: new shocks only impact the baseline variable each year, the implicit assumption being that the impact of past shocks on the different variables is not persistent. The second way to apply shocks is to assume that past shocks to interest and exchange rates are persistent, leading to a more explosive debt path (although results remain relatively close to temporary shocks up to 2016). Starting from the debt ratio in 2011, we apply the different shocks to the debt accumulation equation to obtain debt paths over 2012-21 and draw fan charts. The fan charts of Figure 1.5 are based on temporary shocks, which are applied to the baseline scenario in the following way:

Growth: $g_t = \overline{g_t} + \varepsilon_t^g$, with $\overline{g_t}$ being the baseline value.

Interest rate: $r_t = \overline{r_t} + \varepsilon_t^r$, with $\overline{r_t}$ the baseline.

Exchange rate: $e_t = \overline{e_t} + \varepsilon_t^e$, with $\overline{e_t}$ the baseline.

Sophisticated models of stochastic debt simulation assume fiscal reaction functions to increase the likelihood of the simulated debt path. In this simple exercise, only two simple alternative fiscal policy reactions are assumed, *i.e.* either letting the automatic stabilisers operate, or offsetting them. In the first scenario, a feedback on activity of the automatic stabilisers through fiscal multipliers is added. The fiscal multipliers are derived from Benk and Jakab (2012), taking into account their estimates of tax multipliers (with the assumption that automatic stabilisers mainly operate on the revenue side).

Automatic stabilisers: $\Delta(fiscalbalance) \approx \frac{Taxes}{GDP} \times \Delta(outputgap)$, with $\frac{Taxes}{GDP} = 0.36$

Fiscal multipliers: $\Delta(outputgap) \approx -0.2 \times \Delta(fiscalbalance)$

Bibliography

Benk, S. and Z. Jakab (2012), "Non-Keynesian Effects of Fiscal Consolidation: an Analysis with an Estimated DSGE Model for the Hungarian Economy", *OECD Economics Department Working Papers*, No. 945, OECD Publishing.

Giovanni, J. di and E.H. Gardner (2008), "A Simple Stochastic Approach to Debt Sustainability Applied to Lebanon", *IMF Working Paper*, No. WP/08/97, International Monetary Fund.

OECD (2011), *OECD Economic Outlook*, Vol. 2011/2, OECD Publishing.

Chapter 2

Ensuring financial stability and efficiency

Loan creation has not recovered after the crisis owing to a combination of demand and supply factors. Although the banking sector is sufficiently capitalised in the short term, banks are deleveraging by cutting down their dependence on cross-border financing. The ability of the financial sector to supply credit has been further stifled by a high financial levy, a de facto *ban on foreign currency lending for mortgages, future uncertainties about parent banks' funding and undermined creditors' rights. Up to recently, new measures to restructure household loans did not help borrowers with real repayment difficulties while weakening banks' solvency. The mid-December 2011 agreement between the government and the banking sector was a welcome step towards fair burden sharing. Bank recapitalisation, if necessary, should be done by raising the level of capital so as not to downsize loan portfolios. In the long term, the demand for credit is hampered by large price-cost margins, which call for stiffer competition. The development of the financial markets has also been adversely affected by the* de facto *nationalisation of mandatory pension funds, which played a crucial role in the accumulation of long-term savings. The regulation of mandatory and voluntary pension funds requires harmonisation and transparency to increase their cost-efficiency. An effective co-operation between micro and macro-prudential regulation should be ensured in practice and the financial independence of the financial supervisor strengthened. Co-operation between host and home regulatory authorities should be enhanced in a manner that accounts for systemic risks in Hungary. Finally, an effective independence of the central bank has to be guaranteed.*

The banking sector remains fragile with a risk of credit rationing

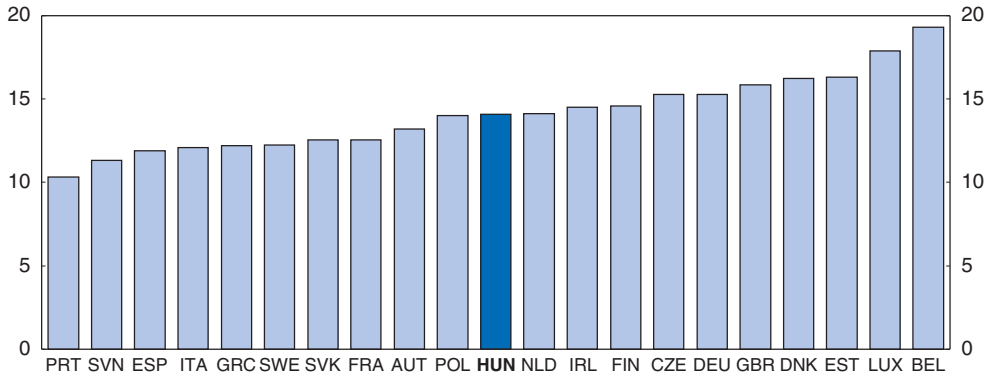
The banking sector remains vulnerable…

Based on prudential ratios, Hungarian banks appear to have sufficient buffers to absorb unexpected losses in the short run and are not overleveraged by international comparison (Figures 2.1 and 2.2). The capital adequacy ratio of Hungarian banks rose from 10.3% in the first quarter of 2008 to 13.8% in the second quarter of 2011, while the leverage ratio has fallen from 12.8 to 11.7. These two trends are partly connected, as deleveraging has contributed to a one percentage point increase of the solvency ratio. In the medium run, the financial situation of banks can be more fragile, because there is a large heterogeneity in capital adequacy between banks and credit quality is deteriorating.

Before the global crisis, banks in Hungary relied on high loan-to-deposit ratios and cross-border financing from parent banks (Figure 2.3). However, this model has become less attractive as illustrated by the announcement of the Austrian Financial Market Authority and the *Oesterreichische Nationalbank* that subsidiaries of Austrian banks should ensure that the ratio of new loans to new stable refinancing (funding raised locally or from multilateral institutions, such as the EIB or the EBRD) does not exceed 110%. Even prior to this announcement, parent banks had been less willing to extend loans to a market that has experienced a sharp deterioration of the economic situation and rising non-performing loans. This is compounded by the situation of some parent banks that need to raise capital in the wake of EU-wide stress tests and the euro area sovereign debt crisis. Moreover, the Hungarian market has become less attractive to foreign investors due to levies on financial institutions and unpredictable regulations concerning household-debt restructuring, though a recent agreement with the banking association is an improvement compared to earlier schemes (see next section). As a result, there was a significant outflow of the banks' foreign

Figure 2.1. **Capital adequacy ratio**[1]

Per cent, 2010

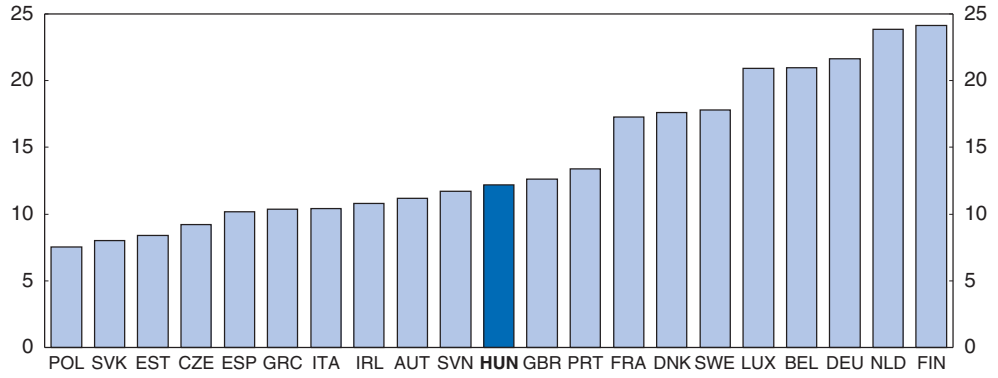


1. A measure of the amount of a bank's core capital expressed as a percentage of its assets weighted by risk.

Source: ECB (2010), "Consolidated Banking Data", *Monetary and Financial Statistics*, European Central Bank.

StatLink http://dx.doi.org/10.1787/888932575940

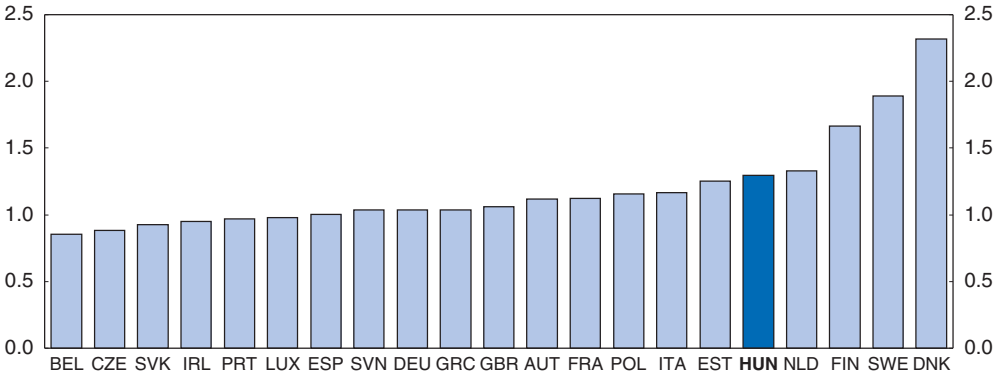
Figure 2.2. **Leverage ratio**
Total assets divided by total own funds, September 2011



Source: ECB (2011), "The balance sheets of monetary financial institutions (MFI)", *Monetary and Financial Statistics*, European Central Bank, November.

StatLink http://dx.doi.org/10.1787/888932575959

Figure 2.3. **Loan-to-deposit ratio**
September 2011



Source: ECB (2011), "The balance sheets of monetary financial institutions (MFI)", *Monetary and Financial Statistics*, European Central Bank, November.

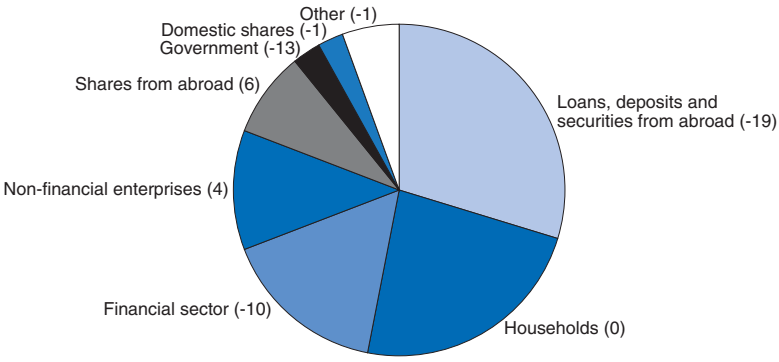
StatLink http://dx.doi.org/10.1787/888932575978

financing: the drop in cross-border loans, deposits and bonds reached 19% in 2010-11 (Figure 2.4). This fall has not been compensated by a growth in deposits of households (stable) or non-financial enterprises, which fell by 10%. Such deleveraging is likely to continue in the future, as some foreign banks are announcing the closure of some of their branches and employee layoffs.

On the asset side, the quality of the bank portfolio has significantly decreased in the wake of the crisis. Growing unemployment, falling housing prices (by close to 7% from their peak in 2008) and a depreciated forint have rendered loan repayment difficult for many borrowers, but particularly so for those that have loans in Swiss francs and other foreign exchange (FX) currencies. Yet the depreciation of the currency was larger against the Swiss franc than against the euro (Figure 1, Panel F in the Assessment and recommendations). Moreover, banks were able to hike interest rates on loans by unilaterally modifying contract conditions, even though the costs of their own financing on the foreign markets have fallen and the policy rate of the Swiss central bank was cut by more than 250 basis points since

Figure 2.4. **The structure of banks' liabilities**

Per cent, first quarter of 2011[1]



1. The wedges of this pie chart represent the shares of different sources of banks' liabilities in the first quarter of 2011, whereas the numbers refer to corresponding transactions in 2010 and the first quarter of 2011 in per cent of stock for each type of liability at the end of 2009. The data is exchange rate adjusted.

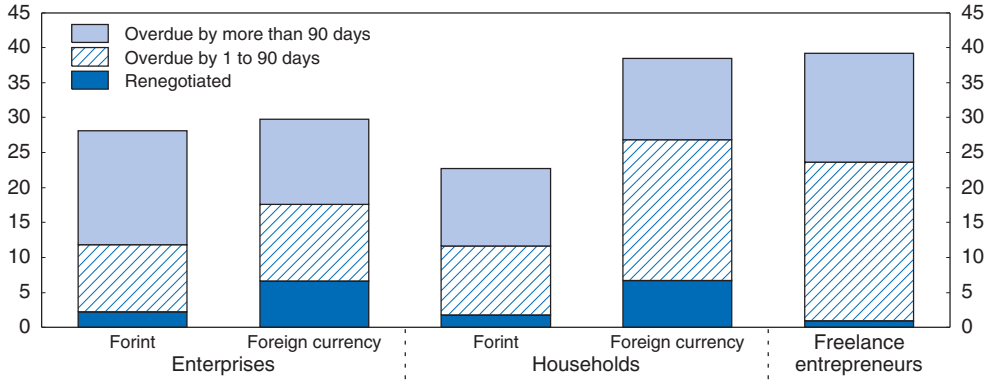
Source: MNB (2011), "Financial Accounts", *Statistical Time Series*, Magyar Nemzeti Bank, July.

StatLink http://dx.doi.org/10.1787/888932575997

mid-2008 (ESRB, 2011). In September 2011, the share of overdue or renegotiated loans climbed to almost 40% for loans in foreign currencies to households (Figure 2.5). The rise in delinquencies reflects a combination of negative equity and high debt servicing burdens. According to the central bank (Magyar Nemzeti Bank, MNB), the debt burden of Hungarian households has increased to a much larger extent than in other OECD countries in Central and Eastern Europe. The probability of delinquency is the highest for unsecured loans and for loans issued between 2007-08. These non-performing loans impair the balance sheets of the financial sector, imposing losses and leaving them with less capital to lend. As a result, expected losses from non-performing assets not covered by provisions have increased to 55% of banks' capital (Table 2.1), which indicates that despite some regulatory action the increase in capital has not kept up with the deterioration of credit quality.

Figure 2.5. **Overdue and renegotiated loans**

Per cent of gross loans, September 2011



Source: HFSA (2011), *Time series data of sectors supervised by HFSA*, Hungarian Financial Supervisory Authority, November.

StatLink http://dx.doi.org/10.1787/888932576016

Table 2.1. **Claims in arrears**

In June, per cent

	2009	2010	2011
Current claims not in arrears	86.8	83.6	80.1
Renegotiated claims	1.5	1.9	2.5
Claims in arrears			
0-30 days	6.5	7.3	7.8
31-90 days	1.7	1.6	1.8
91-365 days	2.4	2.9	3.8
Over 1 year	1.2	2.6	4.1
Estimated losses per total claims[1]	4.9	7.0	9.3
Provisions per estimated losses	38.8	45.3	46.3
Estimated losses net of provisions per own funds	35.8	45.2	54.8

1. Regarding expected loss rates, no loss is assumed for loans that are not overdue and perform duly. A 50% loss rate is assigned to renegotiated receivables, 20% to loans that are in less than one month default, 30% to loans that are overdue for 1 to 3 months, 70% to those between 3 to 12 months and 100% to receivables that have been overdue for more than a year.

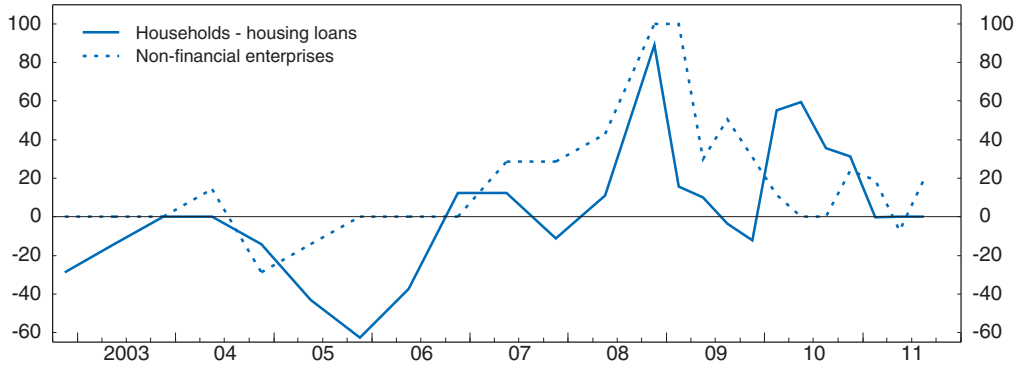
Source: Hungarian Financial Supervisory Authority.

... which could lead to credit rationing

The deterioration of credit quality combined with tighter financing conditions indicates that banks should be encouraged to accumulate more capital by refraining from distributing dividends and issuing high-quality new equity. The recent bank levy compounds the situation since all banks, even unprofitable ones, need to pay it. This creates a serious risk of credit rationing if banks choose to reduce lending instead of increasing the level of capital. For example, an increase in capital adequacy from 14% to 15% can be achieved by a 7% decline in risk-weighted assets under the assumption of constant amount of capital. The still high loan-to-deposit ratio (Figure 2.3) makes a further decline in lending more likely. In fact, a survey of credit officers indicates a tightening of credit conditions: banks charge a higher premium on risky loans and require from their borrowers lower loan-to-value and repayment-to-income ratios and higher credit scores (Figure 2.6). Such pro-cyclical behaviour of credit standards should be avoided in the future by a better regulation that has elements of counter-cyclicality and draws on the international debate in this area.

Figure 2.6. **Credit conditions and credit standards remain tight**

Net per cent of survey loan officers that have tightened or loosened credit conditions and standards[1]



1. A positive figure indicates tighter credit standards and a negative figure indicates looser ones.

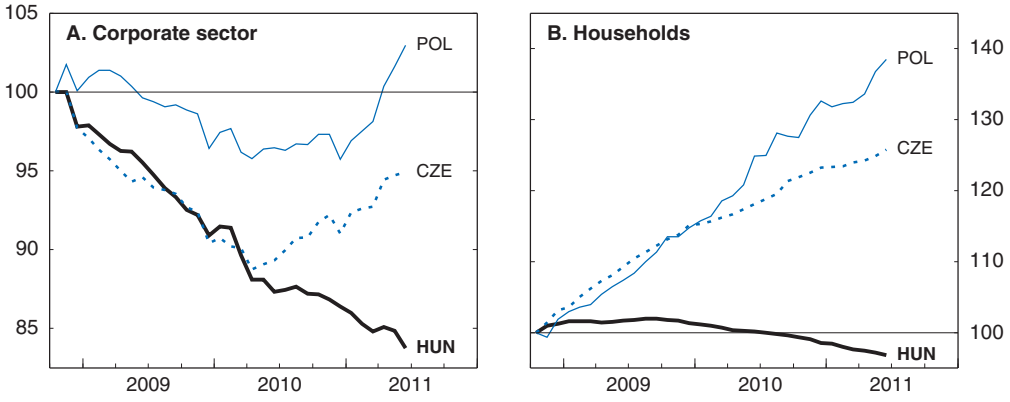
Source: MNB (2011), "Senior Loan Officer Survey on Bank Lending Practices", Magyar Nemzeti Bank, November.

StatLink http://dx.doi.org/10.1787/888932576035

Loans to both non-financial enterprises and households are far below their pre-crisis level and in marked contrast to recoveries in the Czech Republic and Poland (Figure 2.7). The steep drop in lending was caused by a drop in demand owing to the economic crisis but it is largely aggravated by supply factors, such as tighter credit conditions, banks' deleveraging (given a high loan-to-deposit ratio) and increased taxation of the financial sector. According to recent research of the MNB, the decline in supply and demand accounted for the drop in corporate lending by a ratio of around ⅔-⅓ at the end of 2010, respectively (Sóvágó, 2011). Especially damaging for economic growth, outstanding loans to the corporate sector have fallen by more than 15% since October 2008 and there are no signs of improvement (Figure 2.7). The decline has been even larger for small and medium enterprises.

Figure 2.7. **Corporate and household lending**

Exchange rate adjusted, October 2008 = 100



Source: MNB (2011), *Report on Financial Stability*, Magyar Nemzeti Bank, November.

StatLink http://dx.doi.org/10.1787/888932576054

Restoring financial intermediation requires a careful mix of measures

Restoring proper functioning of the financial market following the crisis is challenging since it could lead to conflicting measures. On the one hand, it is crucial that banks clean up their balance sheets and increase their solvency ratios. On the other hand, it is necessary to prevent a downward economic spiral by helping households to deleverage. While these two objectives could conflict with each other, they could also conflict with the third crucial objective of restoring fiscal sustainability. The government has been pursuing these three objectives, but earlier measures taken to strengthen households' solvency or facilitate fiscal consolidation have been detrimental to the banking sector. The burden of restructuring should be more fairly distributed, taking into account the fiscal space of the government, the repayment ability of borrowers and the stability of the financial sector. A recent agreement between the government and the banking association is a welcome step in that direction.

Tighter regulation should take into account risks of procyclicality

The official data on loan-to-value (LTV) ratios is published since March 2009 by the MNB and it shows that 66% of FX loans and 58% of subsidised and non-subsidised forint loans (which account for a smaller share of the total bank portfolio) were disbursed at that time with LTV ratios exceeding 70%. This includes mortgages that were disbursed without collateral (partly for renovation or reconstruction purposes), which was the case of 9% of

FX loans (5% including home equity loans) and 25% of forint loans (23.5% including home equity loans). Although, no comparable data is available for the pre-crisis level, there is widespread evidence that loose credit standards, practiced by banks and allowed by financial regulation, have resulted in a high amount of non-performing loans and a high level of indebtedness of many borrowers. To address this problem, different solutions should be provided to tackle the flow and the stock problem. To prevent the flow of new reckless lending, regulation should be tightened, as was done at the end of 2009 when the government issued a decree on prudent lending that set the maximum LTV ratio for forint mortgages at 75%, for euro mortgages at 60% and other currencies at 45%.

Credit conditions were further restricted in August 2010, as FX mortgages were banned for households. The Home Protection Action Plan softens the ban by allowing persons that have income in FX above a certain threshold to borrow in this currency (Box 2.1). However, few borrowers fulfil these requirements. While such a *de facto* ban appears to be justified because of the risks entailed in foreign currency lending, it also prevents borrowers with sufficient income buffers to absorb currency risks from benefiting from lower interest rates in FX, increasing credit constraints at a time when risks of credit rationing are high. Moreover, there is some evidence that prudential measures to curb FX lending do not always work due to the increase in cross-border lending, which suggests that enforcement requires a close host-home co-operation (Polgár and Zdzienicka, 2010), as detailed in the last section. A more appropriate solution, recommended by the European Systemic Risk Board, is to tighten regulation of FX lending to account for the higher risks associated with it. The regulation adopted in 2009 with different LTV ratios depending on the currency (see above) would be suitable and could complement internal creditworthiness criteria applied by banks. In addition, LTV regulation should be supplemented with limits on repayment-to-income ratios, backed by a systematic verification of official proof of revenues (pay slip or tax forms). The existence of a comprehensive credit registry is crucial for enforcing this last requirement.

Debt restructuring programmes should not impose an excessive burden on banks and be well-targeted

While tighter regulation solves the problem of new FX loans, it does not solve the problem of the high stock of overdue and FX loans. To facilitate the deleveraging of households, the authorities have initially taken measures which have put the bulk of the burden on the banking sector by, first, imposing a moratorium on foreclosures. Recognising that this measure was preventing banks from cleaning their portfolios, the government subsequently proposed a Home Protection Action Plan and Country Protection Action Plan (Box 2.1), which gradually lifts the moratorium on foreclosures and provides measures to reduce household indebtedness. The lifting of the moratorium is welcome since it should facilitate evaluation and/or selling of banks' collateral, and thus an eventual clean-up of their portfolios. The lifting of the moratorium should also mitigate moral hazard problems that have emerged as even solvent borrowers were late on their instalments. The fact that the lifting is gradual is appropriate as property markets are not very deep. Without a gradual adjustment, the flood of sold properties would lead to a collapse of housing prices (the ratio of potentially repossessed properties to transactions amounts to 125%; MNB, 2011).

The authorities have implemented several measures to mitigate the costs of future foreclosures by offering different options of loan restructuring to borrowers (Box 2.1). The first proposed scheme (adopted in May 2011) involved a temporary fixing of the exchange

Box 2.1. **Major measures taken to reduce household indebtedness and to clean-up banks' portfolios in 2011**

The Home Protection Action Plan was announced on 30 May 2011 by the government and was voted by Parliament shortly afterwards. The Country Protection Action Plan was introduced in September 2011, allowing early repayment of FX loans at favourable exchange rates. Finally, in December 2011, the government and the Banking Association have agreed to introduce several changes to the earlier measures that ensure a fair burden sharing between banks and the state budget.

Home Protection Action Plan (May 2011 and modified by the December 2011 agreement)

Elimination of the foreclosure and eviction moratorium. The foreclosure moratorium was abolished for real estate properties valued above HUF 30 million (approximately EUR 110 000) and with an outstanding credit volume of more than HUF 20 million (approximately EUR 70 000) on 1 July 2011. In the case of loans and real estate properties of lower values the moratorium was abolished on 1 October 2011. For these lower value real estate properties a foreclosure quota will be introduced amounting quarterly to 2% in 2011, 3% in 2012, 4% in 2013 and 5% in 2014, of the loans with instalments more than 90 days overdue. The abolition of the eviction moratorium has taken place as of 1 July 2011, nevertheless it has had limited impact since then. First, because of low market activity in the property markets; second, for social reasons as another seasonal moratorium has been implemented according to which eviction in the winter months is prohibited.

Partial elimination of the *de facto* ban on mortgage loans in euros. The only borrowers allowed to take out euro based mortgage loans will be those who have a FX-based income 15 times higher than the minimum wage. At most 20 000 people are estimated to fulfil this criterion.

Temporary fixing of the exchange rate for mortgage debt servicing. The main point of the Plan involves a temporary fixed exchange rate (around 20% below the HUF/CHF rate at the time of the announcement) applicable to the instalments of performing mortgage loan debtors. Only borrowers with no instalments 90 days overdue have the right to participate. The difference between the fixed exchange rate payment and the actual exchange rate is accumulated on the separate forint account bearing the three month BUBOR interest rate, and banks are not allowed to charge any additional fees. After the expiration of the fixed exchange rate period at the end of 2014, borrowers have to repay the difference, meaning an increase in monthly instalments. The government provides a guarantee on 100% of the outstanding volume of the bridge loans during the fixation period until 31 December 2014 and 25% of the volume after the fixation period is over. For the guarantee banks pay a fee of 1.5% during the fixation period (but how much afterwards is unknown). The December agreement contains an extension of the exchange rate fixing programme, available for duly performing FX mortgage debtors and those who are delinquent with a delay of less than 90 days. Accordingly, the exchange rates of the instalments for the participants in the programme would be fixed until end-2016 at HUF/CHF 180, HUF/EUR 250 and HUF/JPY 2.5 exchange rates; borrowers may apply for participation in the programme until end-2012. The difference between the fixed and actual rates will be shared by the borrower, the state and the bank in a way that the principal part of the monthly instalment due will burden the borrower, whereas the interest rate portion of the instalment will be paid by the state and the bank in a 50-50% proportion.

Interest rate subsidy for defaulted borrowers, who are willing to move to smaller flats. Defaulted borrowers could have an interest rate subsidy from the government, if they are willing to move to a less valuable flat (and thus have a smaller loan but also relinquish some of their home equity).

A National Asset Management company. A company would take over the houses of 5 000 defaulted borrowers with the most desperate social background. According to the December agreement, this scheme will be extended to 25 000 residential properties by 2014 (8 000 of them in 2012), focusing on delinquent borrowers who have one or more children and are in the most social need.

Box 2.1. **Major measures taken to reduce household indebtedness and to clean-up banks' portfolios in 2011** *(cont.)*

Country Protection Action Plan (September 2011 and modified by the December 2011 agreement)

Early repayment of FX loans. Announced in September 2011, this measure allows an early repayment of FX loans at a fixed below-market exchange rate (CHF/HUF 180 and EUR/HUF 250). The repayment must be done in a single instalment by relying either on household savings or possibly voluntarily extended forint loans. The households pay no penalty and all the losses related to differences in exchange rates were initially planned to be incurred by banks. The December agreement allows banks to deduct from their 2011 bank levy 30% of the losses.

Other measures of the agreement between the Hungarian government and the Banking Association on foreign-currency mortgages (15 December 2011)

Conversion scheme for foreign-currency mortgages in arrears by more than 90 days. Borrowers fulfilling these conditions can apply to have their mortgages converted into forint loans and subject to a 25% write-down on their face value. This commitment applies only to mortgages secured against collateral with a value less than HUF 20 million (EUR 70 000). Banks may reclaim 30% of the losses resulting from the 25% write-off from the 2012 bank levy.

rate for mortgages in foreign exchange currency. If borrowers choose to participate in this program, their monthly instalments decrease until the end of 2014, but increase afterwards because they will be required to repay their original loan and a "bridge" loan covering the accumulated difference between the actual and the fixed exchange rate. Three thousand contracts were signed under this scheme by the end of December 2011. The second scheme (adopted in September 2011 and closed 30 December 2011) allows borrowers to repay their FX loans at an exchange rate that is approximately 25% below the market rate. The repayment must be done in a single instalment by relying either on household savings or forint loans. To increase participation, the authorities have additionally allowed employers to grant a tax-free support to employees taking part in this scheme (up to EUR 25 000 per person). This measure is expected to have been widely used with at least 20% of performing loans being repaid through this scheme. At the moment of the announcement, estimated losses amounted to the total amount of provisions accumulated by banks. Hence, banks were obliged to accumulate additional provisions to bear these unexpected losses. At the end of 2011, assuming that 30% of losses are deductible from the bank levy, related effective losses for banks amounted to one third of the accumulated loan-loss provisions.

Both "May" and "September" schemes are addressed at borrowers who have no significant arrears on their loan repayment and, hence, are not targeted to borrowers who experience real repayment difficulties. Joining the first ("May") scheme could be beneficial for borrowers who experience temporary difficulties in repaying their monthly instalments. However, unless the forint strengthens considerably (from HUF/CHF 250 to 160 or by 36%), borrowers that have chosen to pay their instalments under the fixed exchange rate will be confronted with an increase in their monthly instalments in 2014. The most indebted borrowers with low incomes will not be able to repay their higher monthly instalments at all. Thus, the current design of the programme appears to be only a temporary solution. The second ("September") scheme raises particularly strong equity issues. Since households need to be able to rely either on their savings or on a refinancing to repay such loans, this measure implicitly helps borrowers without liquidity constrains

(also those who can benefit from savings of relatives or friends). Also, borrowers who are able to use this scheme will most likely be those whose mortgages are near maturity and who have been lucky to benefit from low interest rates on FX loans during the duration of their loans. Moreover, the financial situation of borrowers who cannot participate in the programme is likely to worsen if high participation in the programme triggers a depreciation of the forint due to high demand for foreign currency (in practice the central bank is using its reserves to reduce such risk). This scheme was neither negotiated with the banking community (the first scheme was), nor discussed with the MNB and the HFSA. Since it changes contracts in a retroactive and unilateral manner, it undermines creditors' rights in Hungary, and it has been challenged by banks and their home authorities.

In December 2011, a new program was announced by the government and the Banking Association that targets borrowers with non-performing FX mortgages and allows conversion of their loans in forint provided the value of the property serving as collateral did not exceed HUF 20 million when the mortgage was signed. This measure is accompanied by a 25% write-off of the debt and the borrowers should receive an interest rate subsidy from the state on their forint loan. The design of this programme negotiated with banks has the potential of being better than earlier schemes since it creates conditions to be more focused on distressed borrowers and provides an element of forgiveness that should restore their solvency. Nevertheless, it still fails to apply objective criteria to target borrowers, such as repayment-to-income ratios and negative equity. Such targeting is essential to avoid moral hazard problems, which might be significant, because the government has created an atmosphere of bail-out expectations in the previous few months and some borrowers have stopped paying their instalments. Moreover, this programme does not help borrowers who are temporarily unemployed and would rather need a temporary suspension of payments.

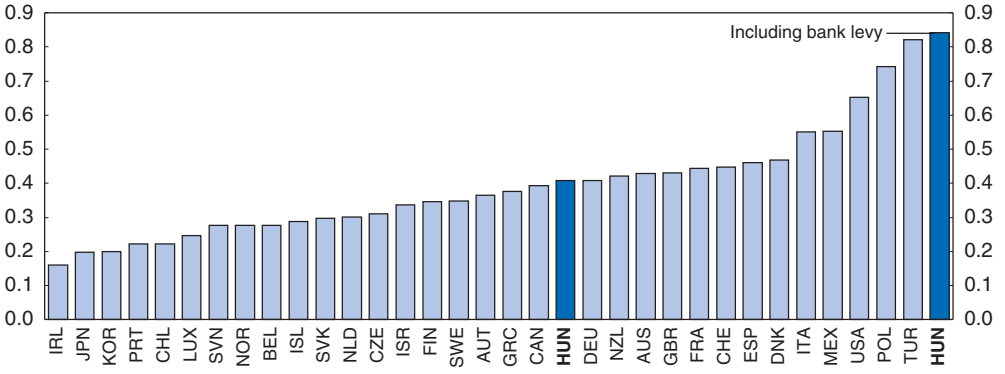
Since banks are reluctant to write off bad loans if they do not have sufficient provisions and capital, legislation should motivate banks to provision sufficiently for future losses. The current legislation often achieves the opposite. As banks are not obliged to put aside provisions on restructured loans that have never had any overdue payments, this encourages them to engage in preventive restructuring and to postpone the recognition of the problem. Such formal forbearance is short-sighted and should be avoided. Rather, the government should offer incentives such as tax credits for restructured loans. Hence, the decision that allows banks to deduct from the 2011 and 2012 bank levy 30% of the losses resulting from different schemes (the early FX mortgage repayment and debt forgiveness of non-performing loans, respectively) is an appropriate step. This should allow them to increase their level of capital and to write off bad loans. The results of the November 2011 stress test conducted by the MNB suggest that in the case of an adverse scenario (that allows a 30% take-up in the early repayment scheme) banks would require an additional capital that amounts to 7% of their own funds. To equip Hungarian banks with sufficient buffers, the commitment of parent banks is of paramount importance. If banks need to raise their capital ratios, they should be encouraged to do so by raising their capital level (by refraining from distributing dividends or by issuing new equity) instead of reducing their loan portfolios. Recapitalising banks when needed and restructuring their balance sheets will reduce future uncertainties and create sound conditions to restart lending.

The design of a financial levy should not hurt bank solvency

Starting from September 2010, the Hungarian authorities have imposed a financial levy on the assets of Hungarian banks, financial enterprises, insurance companies and other financial institutions, whose main purpose was to support fiscal consolidation. It was announced as a temporary measure and is supposed to be replaced by another tax in 2013. The current tax rate is very high in international comparison and its introduction in the midst of the downturn was unnecessarily procyclical. A tax of 0.15% is levied on small banks (up to HUF 50 billion), while large banks pay a rate of 0.53% on their assets in excess of HUF 50 billion. Before the introduction of the new bank tax, an average Hungarian bank – having a ratio of all taxes amounting to 0.4% of total assets – paid taxes at the OECD average, but the new tax has dramatically increased the tax burden of Hungarian banks (Figure 2.8). Adding the new levy to the average tax paid by Hungarian banks in the past brings the ratio to 0.84%, the highest in the OECD. Even if the authorities plan to halve the amount of the levy after 2012, its burden will remain high. On top of losses linked to provisioning on deteriorating portfolios, the tax has taken a considerable toll on the profitability of financial institutions by reducing return on equity of banks by 4.3 percentage points, of financial enterprises by 8.6 and of insurers by 12.3 percentage points. Since loss-making institutions are not exempt from tax obligations, their capital adequacy has deteriorated.

Figure 2.8. **The average ratio of taxes to total bank assets**

Per cent, 1996-2009



Source: BankScope Database, Bureau Van Dijk publishing and OECD calculations.

StatLink http://dx.doi.org/10.1787/888932576073

Given its harmful effects, the financial tax should be cancelled, but it could be replaced with a different levy. The mid-December 2011 agreement with banks confirmed earlier plans to halve the bank levy in 2013. As from 2014 the bank levy will be adjusted to the prevailing relevant legal framework of the European Union, or the practice in effect in member states. Many experts suggest that financial taxation could serve as an important complement to regulation in addressing macro-prudential concerns (European Commission, 2010; IMF, 2010) and it has been implemented in a number of OECD countries (see Table 2.2). If the Hungarian authorities opt for such a "Pigouvian" tax, its base should offer in-built incentives for financial institutions to accumulate capital and raise deposits, reducing reliance on more volatile cross-border funding in FX. While it is tempting to create incentives to lengthen the maturity of foreign funding, the fact that it comes

Table 2.2. **Comparison between bank levies**

	Hungary	Austria	Germany	Sweden	United Kingdom	United States[1]
Start date	2010	2011	2011	2009	2011	. .
Funds raised contribute to	Treasury	Treasury	Banking Fund	Banking Fund	Treasury	Funds to recoup costs of TARP
Expected duration	Temporary	Permanent	Permanent	Permanent	Permanent	At least 10 years until TARP is fully repaid
Tax base	Total assets. Interbank loans and securities of credit institutions are excluded	Balance sheet. Insured deposits and capital are excluded	Liabilities. Non-bank liabilities and equity are excluded	Liabilities with some exceptions	Liabilities. Insured deposits and Tier 1 capital are excluded	Liabilities. Tier 1 capital and FDIC-assessed deposits are excluded
Threshold	None	Tax base of EUR 1 billion	None	None	GBP 20 billion of "relevant" liabilities	USD 50 billion of consolidated assets
Rate	0.15-0.53%	0.055-0.085%	0.02-0.04%	0.036%, but reduced rate for 2009-10. Could depend on risk in the future	0.07%. 0.035% tax rate for "stickier funding" (> 1 year of maturity)	Not set but expected 0.15%

1. TARP: Troubled Asset Relief Program; FDIC: Federal Deposit Insurance Corporation.
Source: KPMG International Co-operative.

primarily from parent banks renders the definition of the loan maturity irrelevant, because parent banks can always demand an early repayment of a long-term loan. In other words, any measure that favours long-term over short-term cross-border financing can be easily circumvented by foreign banks. At the same time, the recognition that parent bank financing is more stable than other cross-border loans will discriminate against domestic banks, which is not desirable. In this context, the best choice for a tax base is to consider total liabilities with the exception of capital and deposits, which are the most stable sources of funding.

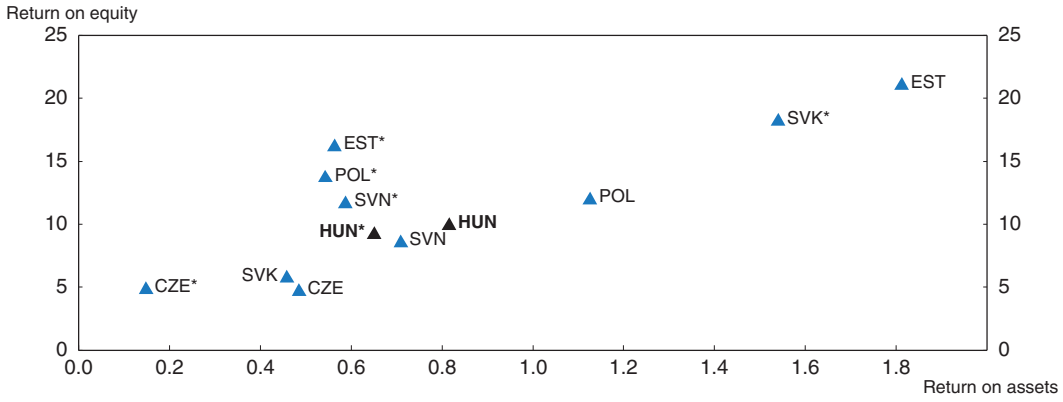
In addition, the Hungarian authorities might opt for a tax whose purpose is to raise revenues. Since financial institutions are exempted from value added tax, such a tax on financial activities might be desirable to create a level playing field between financial services and other sectors. If a tax is introduced to address this issue, its tax base should include all or a part of profits and remuneration, which would have a minimum distortive effect either on the way financial institutions generate profits or on their volume. It is important to find an appropriate tax rate that ensures a fair contribution to the budget, but does not impose a too high burden on the financial sector. Since 88% of banks in Hungary belong to international banking groups, a tax that reduces profits of foreign banks in Hungary might reduce the amount of resources provided by parent banks to their subsidiaries. In the past, parent banks have enjoyed higher levels of profits in Hungary than at home, but this advantage is not overwhelming and should be taken into account when designing a bank levy (Figure 2.9).

Sustainable financing of the economy requires lowering intermediation costs

Reduced costs of financial intermediation can allow borrowers to obtain funds at lower interest rates, while also contributing to financial stability, since lower interest rates decrease adverse selection and moral hazard problems. This is also consistent with empirical findings that efficiency of the financial sector is much more relevant for the economic growth than its sheer size. Although banks serve the primary role in the financing of the Hungarian economy, the development of capital markets and other financial intermediaries is also important. In particular, pension funds serve an essential

Figure 2.9. **Profitability of Hungarian banks in comparison to profitability of other banks in the region and parent banks in home countries**[1]

Per cent, 2005-09



1. The average profitability of parent banks is marked with an asterisk, so that, for example, HUN indicates the average profitability of banks located in Hungary and HUN* presents the average profitability of parent banks that have subsidiaries in Hungary.

Source: *BankScope Database*, Bureau Van Dijk publishing and OECD calculations.

StatLink http://dx.doi.org/10.1787/888932576092

function to accumulate savings with long maturities that can be productively invested long-term. In the following sections, we first discuss how banking intermediation can be rendered more efficient, and then we investigate ways to promote competition between pension funds.

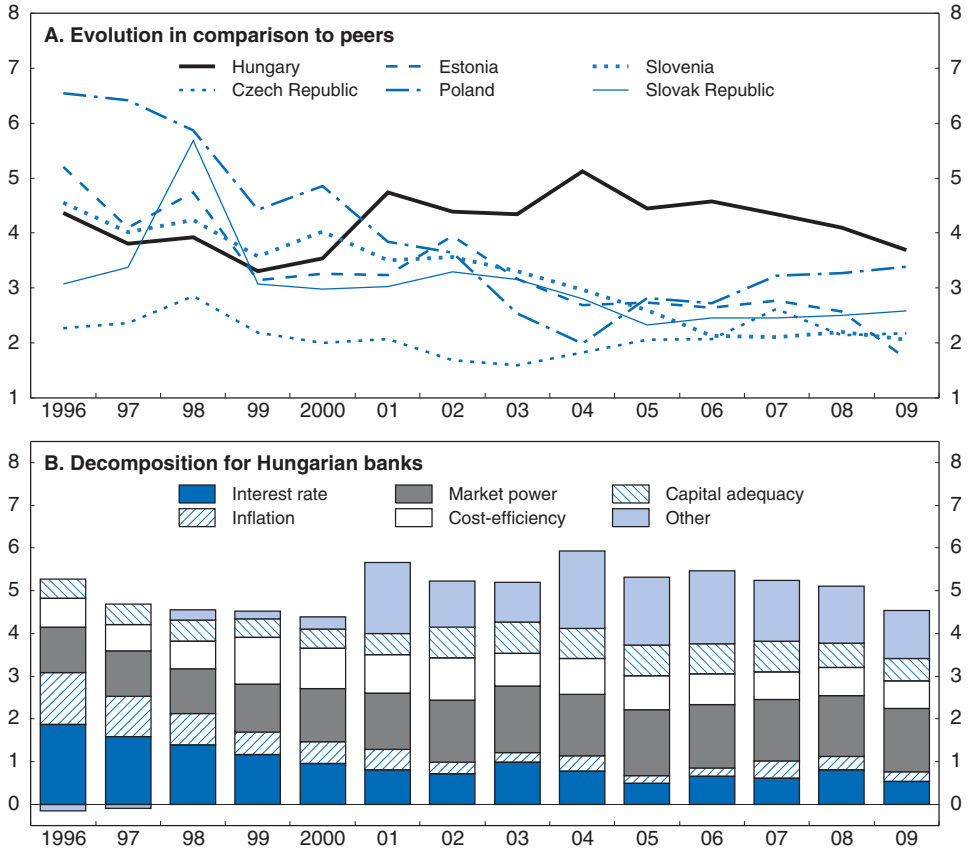
High intermediation costs point to a lack of competition

Demand and supply of loans in Hungary appear to be dampened by high interest rates on loans. According to the EBRD Banking Environment and Performance Survey, 19% of Hungarian firms claim to be discouraged by high interest rates, a much higher proportion of firms than in Western Europe (5%) or in other countries in the region (Brown *et al.*, 2011). In a similar vein, the *Global Competitiveness Report* for 2011-12 places Hungary in 91st position in terms of loan affordability. Explaining high lending rates requires disaggregating them as a sum of funding and banking intermediation costs. The analysis shows that Hungarian banks are able to charge margins that are 1.7 percentage points higher than their OECD peers in Central and Eastern Europe, with margins amounting on average to 4.2% of banks' assets during 1996-2009 (Annex 2.A1; Figure 2.10, Panel A). This wedge in net interest margins (NIM) can be partly explained by persistently higher inflation and money market rates in Hungary (Figure 2.10, Panel B). These macroeconomic factors are responsible for 0.4 percentage point difference in NIM between Hungary and its OECD peers. Higher costs of Hungarian banks additionally contribute 0.3 percentage point to the wedge, while the level of other factors such as credit risk, taxation and market power is similar in Hungary and its peers and, hence, do not contribute to explaining the wedge in NIM between these countries.

A closer look at market competition is warranted, given that banks' market power contributes the most to the cost of financial intermediation (1.3 percentage points out of 4.2 percentage points on average over 1996-2009; see Figure 2.10, Panel B). A lack of competition increases the cost of intermediation due to higher mark-ups as well as to the fact that banks with market power have fewer incentives to increase their efficiency (the

Figure 2.10. **Net interest margins in Hungary in comparison to its peers and decomposition for Hungarian banks**[1]

Per cent



1. For more details on net interest margin decomposition see Annex 2.A1.

Source: BankScope Database, Bureau Van Dijk publishing and OECD calculations.

StatLink http://dx.doi.org/10.1787/888932576111

"quiet life" hypothesis). Indeed, operating costs are an important driver of NIM for all banks (0.8 percentage point out of 4.2 percentage points on average over 1996-2009) and partly explain the wider interest margins of Hungarian banks relative to other banks in the region. Another measure of cost-efficiency can be obtained by stochastic frontier approaches that put Hungary in 22nd position among 25 EU countries between 2004 and 2008. Hungarian banks appeared to be far from the cost-efficiency frontier and there was room to increase their efficiency by 60-70 percentage points to reach the level of the most efficient banks in the EU (Molnar and Holló, 2011).

The simplest way to measure the degree of market competition is to rely on market structure measures such as the Herfindahl index and the share of the largest three banks (CR3). Additionally, one should consider measures that estimate econometrically the actual behaviour of banks, such as the Panzar and Rosse H-statistic and the Lerner index (Box 2.2). All these indicators point to the average level of competition of the Hungarian banking sector in comparison to its peer group (Figure 2.11). Nevertheless, the price-cost margin is 41% according to the Lerner index. Importantly, this average figure hides a wide heterogeneity between markets with price-cost-margins reaching 60% in some consumer

Box 2.2. **Measuring market competition**

Assuming that more concentrated markets lead to less competition, the easiest way to measure market competition is to rely on market concentration measures, such as the share of assets held by the top three largest banks (CR3) and the Herfindahl Hirschman index (HHI), defined as the sum of squared market shares and calculated separately for assets, loans and deposits.

Alternatively, the theory of contestable markets suggests that one can have competitive markets even in concentrated systems, whereas collusive actions can be undertaken even in the presence of many firms (Claessens and Laeven, 2004). Thus, a better approach is that of Panzar and Rosse (1987), who propose to investigate the extent to which a change in factor input prices is reflected in individual bank's revenues by estimating the following reduced-form equation on pooled samples for each country:

$$Ln(P_{it}) = \alpha + \beta_1 ln(W_{1,it}) + \beta_2 ln(W_{2,it}) + \beta_3 ln(W_{3,it}) + y_1 ln(Y_{1,it}) + y_2 ln(Y_{2,it}) + y_3 ln(Y_{3,it}) + \varepsilon_{it}$$

where P_{it} is the ratio of gross interest revenues to total assets, W_1, W_2, W_3 are the input prices of deposits, labour and fixed assets. Control variables are included, such as Y_1 – capitalisation ratio, Y_2 – the ratio of loans to total assets, and Y_3 – bank size measured by a logarithm of assets. The model provides a H-statistic which equals $\beta_1 + \beta_2 + \beta_3$.

Under monopoly, an increase in input prices increases marginal costs, reduces equilibrium output, and consequently lowers total revenues. Under perfect competition, an increase in input prices raises both marginal costs and total revenues by the same amount. Accordingly, the H-statistic is interpreted as follows: $H < 0$ indicates monopoly; $H = 1$ perfect competition; and $0 < H < 1$ monopolistic competition.

Whereas the H-statistic provides a proven way to measure market competition, it does not allow measurement of the market power of an individual bank. The Lerner index measures a bank's market power and is computed as the difference between a bank's price of assets and the marginal cost, divided by the price. The index values range from 0 to 1, with higher numbers indicating greater market power and hence less competition. The marginal cost is estimated relying on the stochastic frontier approach on the basis of a translog cost function with one output (total assets) and three inputs (borrowed funds, labour and physical capital).

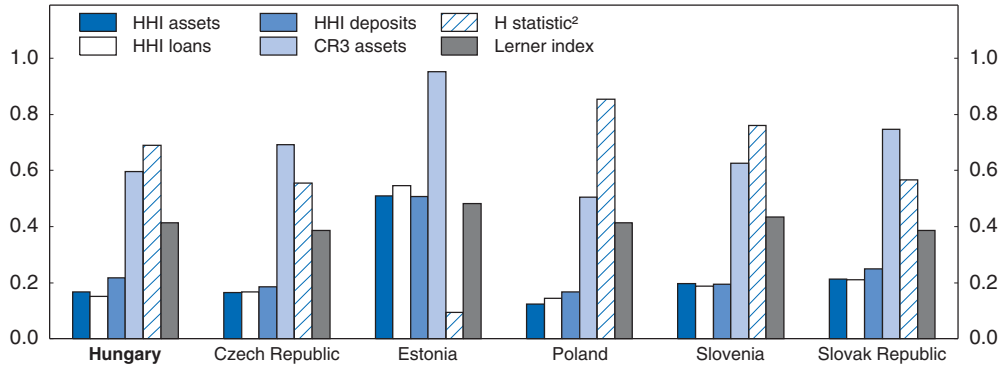
loans, while loan markets for enterprise loans are rather competitive (Molnar *et al.*, 2007). Such a high market power of banks calls for strengthening of competition that would exert a pressure on banks to increase their cost-efficiency and lower their spreads.

Competition could be enhanced by encouraging consumer mobility

Traditionally, market competition in the banking sector has been enhanced by lifting entry barriers and removing product restrictions. As the Hungarian banking market is fairly liberalised, it is more challenging to design policies to achieve effective competition. Instead of further bank liberalisation and/or deregulation, one should encourage consumer mobility by lowering switching costs, increasing price transparency of various financial services, improving the design of "credit bureaus", lowering closing charges when borrowers decide to repay their loans early, discouraging product bundling and tying, and mandating easy portability of one's bank account number. Despite recent steps that go in the right direction to address some of these issues, there is room for further improvements.

Figure 2.11. **Competition measures**[1]

1996-2009



1. Competition measures, such as the Herfindahl-Hirschman index (HHI), concentration ratio (CR3), H-statistic and Lerner index are explained in Box 2.2.
2. Panzar and Rosse approach.

Source: *BankScope Database*, Bureau Van Dijk publishing and OECD calculations.

StatLink http://dx.doi.org/10.1787/888932576130

The architecture of the credit bureaus should be further improved

The absence of credit information sharing between banks can lead to well-documented "hold-up" problems as borrowers cannot switch banks due to information asymmetries and are thus constrained to pay higher interest rates. A well-designed credit information sharing scheme has been shown to lower the cost of intermediation and to improve access to credit (Brown *et al.*, 2009). In Hungary, a private credit bureau – BISZ Central Credit Information System (CCIS) – provides negative credit information on consumers and negative and positive information on businesses since 1995, and two credit bureaus collect positive information on individuals on a voluntary basis. However, the level of coverage (16% of the adult population) lags far behind the OECD average of 64% and other countries in the region (96% in the Czech Republic and 75% in Poland).

A law passed in November 2011 providing the legal framework for mandatory sharing of positive and negative information regarding individual loans is an important step forward. The effective implementation of this new law is the key. The HFSA should ensure that all banks report credit information accurately and on time and it should have sufficient sanctions to punish institutions that refuse to do so. This is an important issue, as some large banks might not report such information because it will reduce their informational rents. In fact, some large banks (including the largest bank, OTP) and many small and medium banks have not joined the existing voluntary scheme – Credit Reference. Similarly, the HFSA should ensure that all borrowers have access to this information and can demand corrections in case of misreporting.

Although the new law is a welcome development, there are several ways to improve the design of the credit information sharing. The primary goals of any credit registry are to: *i)* help borrowers to switch banks by diminishing "hold-up" problems; *ii)* improve pricing of risk; and *iii)* help the supervisor. While the new law aims to achieve the first goal by collecting positive information, it falls short regarding the other goals. The new law allows individual borrowers to deny access to their data for other financial institutions. In the light of the current debate on prudent lending, this prevents banks from observing the overall debt level of their clients, so that prudential measures based on maximum

repayment-to-income ratios cannot be implemented. The memory of the existing system covers five years and, since January 2011, information on bad loans is deleted after one year if they have been repaid. According to the World Bank's *Doing Business* indicators, this last measure is considered to have a negative effect on credit access because it decreases the depth of information sharing. Naturally, there is a trade-off between the need to discipline borrowers and the need to give them a "second chance" and credit bureaus in OECD countries retain data for very different periods (Rothemund and Gerhardt, 2011). Yet, the Hungarian authorities might consider strengthening the disciplining role of the credit registry by lengthening the memory of defaults to ten years and, if debt is recovered, to three years. A ten-year memory is above the EU average, but it is applied in a number of countries, such as the United States and Belgium, and is advisable in a country with a relatively poor credit culture.

Credit registries should additionally be used by the financial supervisor to monitor credit risk of individual financial institutions, as well as to analyse the stability of the entire financial system, improve policy design, analyse the impact of financial regulations and conduct research. In this respect, information that is being collected by private bureaus is not sufficient for such analysis as it lacks data on collateral and other risk mitigation factors, as well as data on overall borrower health (leverage, profitability, etc.). Moreover, for supervising purposes, data needs to be stored by the central bank or the financial supervisor (without an unnecessary duplication of databases) for a very long period, because long-time series are required to analyse credit cycles and credit risk over the long term. Such long-term storage can coexist with the individual data disclosure that is limited to a certain number of years. The importance of the use of credit information by a supervisor has grown after the introduction of Basel II, because the supervisor has to validate internal credit risk models of individual banks. In this respect, the supervisor could use information from the credit register to model the probability of default and loss-given-default and then evaluate banks' risk models against these yardsticks (Trucharte Artigas, 2004). The use of such data can also be used by the supervisor in the design of procyclical macro-prudential regulation, because it provides information about credit cycles in the past.

Enhancing transparency of bank products' pricing and further lowering switching costs to promote competition

The Hungarian authorities have made substantial progress in ensuring transparency of interest rates on loans and deposits and in establishing the necessary framework for clients' mobility between banks. In the second half of 2010, conditions for unilateral contract modifications were tightened to limit adverse contract modification to the following reasons: adverse changes in funding costs or availability of funding; credit risk growth; modification in legislation that has a direct effect on the costs in respect of loan, credit and lease contracts. A new law passed in November 2011 regulates the interest rate setting of mortgages by allowing contracts either with fixed or variable interest rates. According to this legislation, a fixed interest rate should remain fixed for the duration of the contract, while a variable interest rate should follow a transparent formula that includes a time-varying reference rate and a constant margin. If implemented in the right way, this reform should put an end to unilateral contract modifications of housing loans, thus ensuring interest rate comparability and fostering bank competition. Given these potential benefits, this legislation should not be restricted to mortgages and should be extended to all types of loans.

Switching costs have also been reduced from very high levels (4-8% of the present value for home mortgages and 4-10% for personal loans) to a maximum 1% for consumer loans and 1-1.5% for residential mortgages. Additionally, the new law that is in effect from late November 2010 sets a 0% closing charge for mortgages that simultaneously fulfil the following conditions: *i)* the borrower decides to make an early repayment of the mortgage for the first time; *ii)* the borrower took a loan more than two years ago; *iii)* the amount of early repayment does not exceed half of the mortgage; and *iv)* early repayment is not financed by another credit institution. Unfortunately, borrowers are not always aware of low closing charges, which naturally deters them from switching banks. The clause that customers cannot benefit from the 0% closing charges when the early repayment is financed by another credit institution should be dropped to foster bank competition. The effectiveness of low closing charges is further undermined by the lack of portability of state housing subsidies between banks, as a borrower loses such a subsidy if he switches banks (GVH, 2009).

The effect of these reforms in not felt yet, as the implementation of the law on transparent interest rate setting has been delayed at banks' request. This was done as part of the December 2011 agreement with the aim to reduce the burden on banks linked to numerous debt restructuring programs and the financial levy. Nevertheless, this means that Hungarian borrowers continue to pay much higher interest rates than borrowers in other countries in the region, discouraging their demand for new loans. In the future, the implementation of the new laws should be closely monitored by the Hungarian Competition Authority. The role of this independent agency should be strengthened by providing it with enough financial resources to regularly assess the degree of competition in the financial market. Its enquiry into banking sector competition, published in 2009, has been a success and should become an annual exercise.

Efficient regulation of pension funds should spur long-term savings

Unlike banks that have short-term liabilities, pension funds enjoy long term stable funding that gives them a comparative advantage over banks to finance long-term investment via bond and equity markets. Hence, they can stimulate capital market development. The overall level of savings can increase as well, because pension fund assets are illiquid and households' demand for liquid assets has to be satisfied with other means. The development of long-term contractual savings also implies that long term interest rates should fall, further increasing the share of long-term projects that can be financed. Such theoretical considerations are supported by robust empirical evidence that the introduction of funded pension schemes, particularly with mandatory contributions, encourages capital market developments in Central and Eastern Europe (Hryckiewicz, 2009). As to pension fund members, they benefit because sources of their pension benefits are diversified and they could receive a higher return on their savings. The positive spillovers of pension funds on the economy are often recognised by policy-makers and incentives to invest in pension funds by offering tax credits are often provided (which is the case in Hungary). In this light, a decision to suppress the second fully-funded pillar of the Hungarian pension system (see Chapter 1) could have negative consequences for capital market development. Before the suppression, total assets of private pension funds amounted to 14% of GDP, but this has fallen to about 4% of GDP.

Returns of pension funds have been rather low in the past

Over the period 1998-2010, mandatory Hungarian pension funds achieved an average annual real net yield of 1.65%, which is very low in international comparison (Tapia, 2008). When compared with different benchmarks in Hungary, investment returns of private pension funds are lower than the growth of wages, the stock market or the yield on government debt securities in Hungary during the same period (Table 2.3). The performance of mandatory pension funds has suffered from the fact that they had started to increase their stock market investment just at the peak of the market in 2007. An alternative way to analyse the performance of pension funds is to see whether they are able to beat the market, which can be achieved with the help of alpha estimates or Sharpe and Treynor ratios. The results of such analysis for the period 1998-2004 suggest that Hungarian pension funds underperformed the market by 5% annually (Bohl *et al*., 2011). The lower return of mandatory private pension funds is partly explained by their conservative investment policy; they mostly invested in Hungarian government bonds (Figure 2.12). Such policy is common for transition and developing economies that have shallow financial markets and possess little expertise in investing. However, the problems related to the shallow domestic capital markets could have been overcome by investing in foreign stock markets, which should be relatively easy as many pension funds are owned by foreign investors and regulations allow such a strategy. The international diversification should not only diminish risk of pension funds, but should also prevent local asset bubbles, which might be created if local markets cannot absorb large investment efficiently.

Table 2.3. **Relative performance of pension funds**

Per cent, 1998-2010

	Geometric mean[1]
Net yield of private pension funds	
Mandatory	1.65
Voluntary	1.13
Growth of the stock market (BUX index)	1.71
Wage growth	3.19
Benchmark yield on government debt securities (3 months)	2.17

1. All growth rates are real.

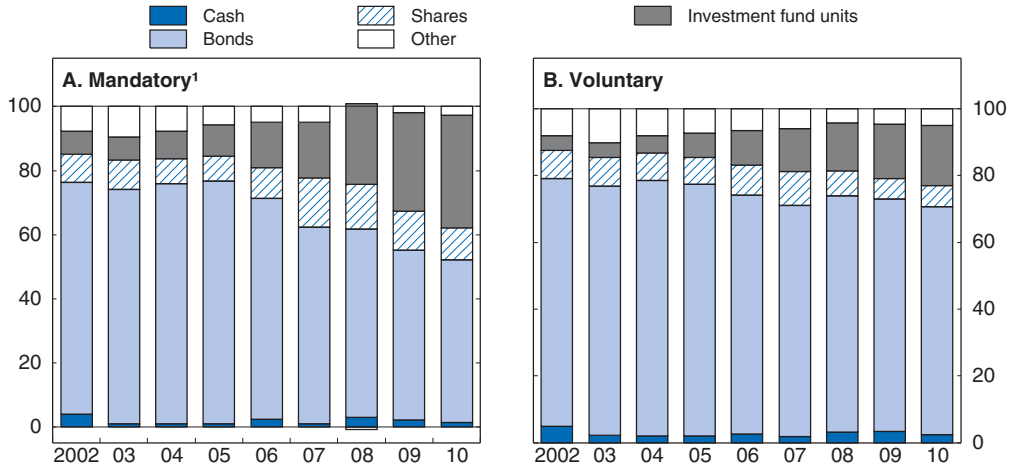
Source: Budapest Stock Exchange, Hungarian Financial Supervisory Authority, Hungarian Central Statistical Office and Magyar Nemzeti Bank.

Pension fee structure needs to be rendered more transparent to promote competition

Hungarian pension funds are designed as defined contribution funds, which means that high administrative and asset management costs can erode investment returns. Pension funds charge fees to cover a host of operating costs. The structure of charges is fairly complex as it includes two different ratios. A fee on contributions is a front-loaded charge because its ratio to total assets falls over time as assets in the pension fund accumulate. A management fee is levied on accumulated assets and is constant over time. A reduction over time of the latter fee has a larger impact on the value of the pension, because it influences all assets each year. More importantly, the relative long-term effects of these fees on accumulated assets depend on the future rates of investment return and wage growth, which are difficult to forecast.

Figure 2.12. **Portfolio composition of pension funds**

Per cent



1. In the "Other" category, in Q3 and Q4 2008, on the balance sheet date, the amount of the liabilities from securities transactions exceeded the value of the other securities.

Source: HFSA (2011), *Time series of sectors supervised by HFSA – Pension funds*, Hungarian Financial Supervisory Authority, September.

StatLink http://dx.doi.org/10.1787/888932576149

Given the complexity of fees, a comparison of pension funds' cost-efficiency within a country and between countries is far from straightforward. To summarise different fees and commissions, the standard approach is to compute a charge ratio, which shows the percentage of assets lost during the lifetime of accumulation due to different fees and commissions (Box 2.3). The level of the charge ratio depends on the assumptions regarding wage growth and investment return and hence, a comparison between countries requires common assumptions. Assuming zero wage growth and a 5% investment return, Hungarian pension funds charge fees that reduce the value of the pension by 22.6%, which is relatively high when compared to similar OECD countries (Table 2.4). If translated into an equivalent fee on assets, such a substantial reduction is equivalent to a 1% fee on assets per year. Besides a high fee level, Hungarian pension funds exhibit a very large variation in fees (from 0.5% to 2.2% of assets) suggesting that the market is not competitive. Pension funds that are managed by banks appear to charge higher fees on asset management.

It should be noted, though, that one of the reasons for high charges levied by Hungarian pension funds relates to their relative lack of maturity. International experience shows that operating costs decline sharply during the first decade after inception (Tapia and Yermo, 2008). Between 2001 and 2010, the charge ratio of mandatory pension funds has declined from 26% to 19%, while the ratio for voluntary pension funds has gone from 22% to 19% (Figure 2.13, Panel A). Importantly, if we assume that the wage growth and investment return are equal to their historic averages for the period 1989-2010, the charge ratio in 2010 is 15.5% for both mandatory and voluntary pension funds (Figure 2.13, Panel B).

High operating costs are usually associated with low levels of competition. In 2009, the Hungarian pension market consisted of 20 mandatory and 68 voluntary pension funds, which is a relatively high number for such an economy (Gomez Hernandez and Stewart, 2008). Despite this, the market for mandatory pension funds was rather concentrated (the concentration ratio [CR] for the largest three pension funds amounted to 63% and the

Box 2.3. **Charge ratio**

To compute the charge ratio of pension funds, the total accumulated balance in the presence of two fees is first computed: one levied on contributions and one levied on assets.

$$A(a_1, a_2) = c(1-a_1)e^{(r-a_2)T} w_0 \frac{e^{(g+a_2-r)T}-1}{g+a_2-r}$$

where a_1 is a charge which is levied in proportion to contributions, a_2 is a charge which is levied in proportion to assets, c – a pension contribution rate as a proportion of earning, r – investment return, g – growth of individual earnings, T – number of the year of contributions, w_0 – initial salary.

Next, the accumulated balance in absence of any fees is computed:

$$A(0,0) = ce^{rT} w_0 \frac{e^{(g-r)T}-1}{g-r}$$

Finally, the charge ratio is:

$$C = 1 - \frac{A(a_1, a_2)}{A(0,0)}$$

Importantly, to calculate a charge ratio, one has to make assumptions about the growth of income and investment return. The variables on initial salary and contribution rate have no impact on the charge ratio because they disappear in the final formula. The above formula shows that a salary increase and a charge ratio have a negative relationship if fees are levied on assets and a positive one if fees are levied on contributions. Conversely, investment returns are positively (negatively) correlated with a charge ratio if fees are levied on contributions (assets). For more information on calculation and interpretation of charge ratio, see Whitehouse (2001).*

* Whitehouse, E. (2001), "Administrative Charges for Funded Pensions: Comparison and Assessment of 13 Countries", *Private Pensions Systems: Administrative Costs and Reforms*, Private Pensions Series, No. 2, OECD Publishing.

Table 2.4. **Charge ratios and equivalent asset-based fees**

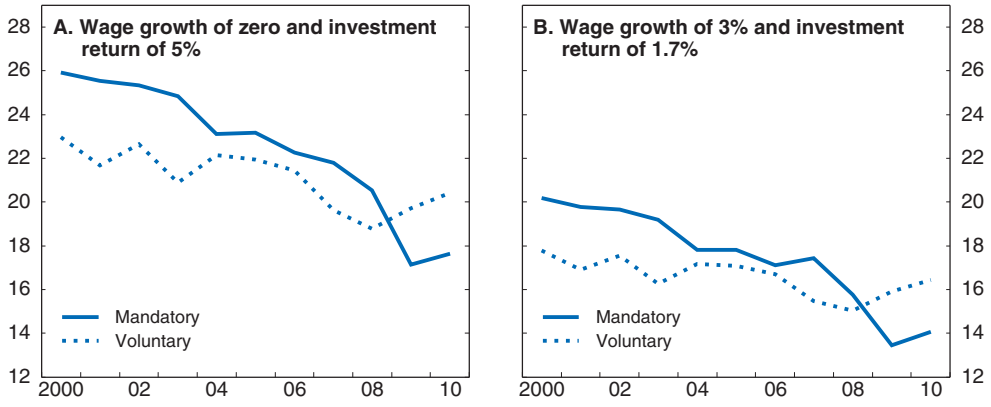
Per cent, 2001-07

	Pension fund established (year)	Average charge ratio	Equivalent asset-based fee			
			Average	Minimum	Maximum	Standard deviation
Hungary	**1998**	**22.6**	**1.0**	**0.5**	**2.2**	**0.6**
Chile	1981	14.6	0.6	0.6	0.7	0.0
Czech Republic	1994	38.1	1.9	0.8	2.8	0.6
Israel	1995	13.7	0.6	0.1	0.7	0.2
Mexico	1997	14.9	0.6	0.5	0.9	0.1
Poland	1999	18.7	0.8	0.7	0.8	0.0
Turkey	2003	45.9	2.5	2.0	3.6	0.4

Source: D. Gomez Hernandez and F. Stewart (2008), "Comparison of Costs and Fees in Countries with Private Defined Contribution Pension Systems", *IOPS Working Papers on Effective Pension Supervision*, No. 6, International Organisation of Pension Supervisors.

Herfindahl Index was 0.18), while the structure of the market for voluntary pension funds was less concentrated (CR = 39 and HHI = 0.08). Previous studies have shown that the relationship between the number of pension providers and costs is not straightforward. Instead of fostering competition, a large number of providers appear to constrain pension funds from achieving economies of scale in small economies. Economies of scale on the

Figure 2.13. **Charge ratios of Hungarian pension funds**
Under different wage growth and investment return assumptions, per cent



Source: OECD calculations based on the data available at HFSA (2011), *Time series of sectors supervised by HFSA – Pension funds*, Hungarian Financial Supervisory Authority, September.

StatLink http://dx.doi.org/10.1787/888932576168

country level can also exert a downward pressure on costs and they depend on the accumulated balance of pension funds, which is a function of the population size, average salary and contribution rate. This is the main reason for relatively high costs of voluntary systems that have low contribution rates and might have difficulties achieving economies of scale (Gomez Hernandez and Stewart, 2008).

Lower operating costs can be achieved via enhanced transparency

Competition can be spurred if members of pension funds can move their accumulated savings to more cost-efficient pension funds without an additional cost. As exit fees are prohibited, this is possible in Hungary, and this should theoretically exert market discipline and bring down costs. However, there is little evidence that members are responsive to high fees and appear, on the contrary, to be rather motivated to change pension funds under the influence of marketing and sales agents. Such counter-intuitive behaviour is easily understood if one considers limited economic education that leads to poor understanding of the fee structure (Tapia and Yermo, 2008). Moreover, two separate fees on contributions and assets render the comparison of fees virtually impossible for a non-specialist. Hence, more transparency is needed.

Currently, the HFSA is publishing information on its web page on net returns for each pension fund, as well as information on the amount of total fees and commissions as a share of total assets. Given the complexity of the fee structure, the latter ratio is misleading and should be complemented with information on charge ratios. Since charge ratios depend on the assumptions regarding wage growth and investment returns, charge ratios should be presented under different scenarios. This would allow fund members to choose the appropriate fund depending on their own wage growth expectation and riskiness of their portfolios. Since such information can become very complex, this calls ultimately for simplifying the fee structure, allowing a fee either on assets or contributions. This would greatly improve the comparability of costs and a number of countries with competitive pension fund markets, such as Chile and Sweden, have opted for one fee.

The discriminatory regulation between mandatory and voluntary pension funds should be lifted

A complementary way to induce pension funds to reduce their costs is a regulatory limit on the maximum amount of fees and commissions that can be charged by pension funds. Indeed some of the countries with the lowest operating costs, such as Sweden and Israel, have achieved this partly due to different cost-limiting measures (Tapia and Yermo, 2008). The choice of such limit is crucial as it should be high enough to allow pension funds to cover their operating costs. Thus, it should be based on a sound analysis that looks *inter alia* at the dispersion of operating costs on the market. A low fee limit implicitly discourages pension funds from active asset management, which may be a good thing, because empirical evidence shows that very few institutional investors succeed in beating the market.

The choice of the fee limit is crucial in the Hungarian context. The dissolution of the second pillar led to a fragmented market with voluntary pension funds and much reduced mandatory pension funds (only 10% of their assets have not been transferred to the first pillar) that now both fulfil almost the same functions, but are subject to different regulatory requirements. The most important difference relates to the maximum fee limits. Voluntary pension funds face a 0.8% limit on their asset management fees and 6-10% limits on their contribution fees (depending on the size of contributions). At the same time, mandatory pension funds are currently confronted with much stricter fee limits that amount to 0.9% of assets and 0.2% of contributions that do not allow them to cover administrative costs and threaten their solvency. Such fees imply a charge ratio of 6%, which is not observed even in countries with the most efficient pension funds. To level the playing field, such discriminatory regulation should be lifted: the authorities should either drop the maximum limits on fees or should choose them more carefully and apply the same limits to both mandatory and voluntary pension funds.

Financial regulation and supervision has to take into account systemic risks

Macro-prudential regulation should be adapted to local credit cycles

In Hungary, there is little debate about the macro-prudential regulation that is appropriate to its domestic conditions. The only available macro-prudential tool involves a 90 day ban on activities that can pose risks for financial stability and is at the disposal of the HFSA. Such a measure can be used only in extreme situations and, hence, does not allow it to prevent the build-up of financial risks. One of the reasons for such a lack of an in-depth debate is the absence of a clear mandate for financial stability. Until recently, the responsibility for macro-prudential policy has been very fragmented in Hungary, divided between the Ministry for National Economy, the MNB and the HFSA with no clear mechanism to ensure that macro-prudential risk warnings and/or recommendations are followed up and translated into policy action.

A new cardinal law (subject to a two-thirds majority to be modified) on the central bank passed on 30 December 2011 equips the MNB with the mandate for macro-prudential regulation backed by regulatory independence to choose its instruments. This is a welcome development because it ensures a more transparent and efficient legal framework for the allocation of responsibilities and the MNB appears to have the necessary expertise to fulfil this new role (see below). The role of the micro-prudential supervisor, HFSA, was also strengthened by equipping it with some regulatory powers. At the same time, the Ministry

for National Economy still has the right to issue regulations, including those on macro-prudential tools. While a transparent distribution of responsibilities is necessary to ensure accountability of each agency, an effective co-operation between them is also essential in order to use the macro-prudential toolkit effectively (de Larosière *et al.*, 2009). It remains to be seen how the new system is implemented in practice. In this perspective, the Financial Stability Board (FSB), which includes the Governor of the MNB, the President of the HFSA and the Minister for National Economy, should ensure effective co-ordination between these three institutions.

Such a tripartite agreement is important in the Hungarian institutional context. The MNB is equipped with the mandate for financial stability, serves as a lender of last resort and its monetary policy transmission is affected via bank credit and capital channels. The HFSA should be consulted because it is responsible for micro-prudential supervision and has the best on-site expertise on the solvency of individual banks. The Ministry for National Economy should also be involved because it is responsible for taking the ultimate decision about whether to bail out insolvent banks with the help of taxpayers' money. Similar to other OECD countries that have tripartite arrangements, the main function of the FSB is not decision making but rather analysis and co-ordination and it may issue warnings as well. In this respect, the FSB has failed in the last months to ensure sufficient communication, as many measures that could potentially endanger financial stability have been adopted without proper consultation with the MNB and the HFSA. The fact that such consultations are not required when draft laws are submitted to Parliament by its individual members (as happened with the law on early repayment of FX loans at preferential exchange rates) is a clear concern that should be rapidly addressed.

Granting the mandate for macro-prudential supervision to the central bank is consistent with the emerging consensus among economists. The MNB already conducts macroeconomic analysis and is interested in financial sector stability because it ensures the transmission of monetary policy. Moreover, the conduct of macro-prudential policy requires the same amount of autonomy from political and interest group pressures as the monetary policy. The independence of macro-prudential policy is warranted because short-term electoral interests may bias policy away from longer-term societal interests and, moreover, technical complexity of the issues suggests delegation of decision-making to experts (BIS, 2011). The MNB already carries out a rather comprehensive analysis of systemic risks in its *Financial Stability Report*; it also has experience in macro stress-testing and has started to collect data related to financial stability issues. It had correctly identified foreign currency lending as the primary risk to financial stability long before the crisis, but no effective policy action was taken. Yet its macro-prudential analysis must be strengthened by defining systemic risk indicators, and creating early warning and spillover models. Macroeconomic stress testing approaches should be improved with the aim to test the resistance of the banking sector to different types of risk, such as those arising from credit developments, the interest rate, the exchange rate, asset prices and liquidity.

But macro-prudential analysis cannot be meaningful unless it can somehow impact bank regulation and supervision. To illustrate the urgency of this issue, consider the stress-test results published by the MNB in its November 2011 *Stability Report* that uncovered additional capital needs by Hungarian banks. Leaving this warning unanswered undermines the stability of the financial system. Therefore, it is a welcome development that in the new law on the central bank the MNB received not only the responsibilities, but also instruments to ensure macro-prudential stability. The MNB has been empowered to

issue legally binding decrees on: the prevention of excessive extension of credit; liquidity requirements to prevent the growth of systemic liquidity risks; the timing, architecture and functioning of anti-cyclical capital buffers; and the additional capital requirements of systemically important institutions. It is important, however, that the macro-prudential regulation does not interfere with the conduct of the monetary policy. Unfortunately, the new law does not ensure a separate decision-making process for monetary policy and financial stability decisions inside the central bank, and thus the MNB should be particularly vigilant in setting its priorities in a transparent way and explaining the possible trade-offs in its reports.

Since the mandate for financial stability requires the same level of institutional independence as the conduct of monetary policy, several important amendments to the law on the central bank raise concerns. A new procedure was established to select the external members of the Monetary Policy Council (MPC) by a parliamentary committee and four new members were appointed this way in early 2011. Further amendments subject to a two-thirds majority were introduced at the end of 2011. The power of the governor to nominate his two deputies, also members of the MPC, was repealed and transferred to the prime minister, while the maximum number of MPC members was raised from seven to nine and that of deputy governors from two to three. Although such appointment procedures exist in many OECD countries, they represent a clear departure from best practices (Cukierman *et al.*, 1992; European Commission, 2006). Undertaken against the backdrop of frequent government criticism of the central bank decisions and its governor, multiple previous changes to the law (which have already significantly cut the remuneration of the governor and his deputies), these changes could undermine central bank independence. The European Central Bank and European Commission have expressed significant concerns about central bank independence on several occasions. It is crucial to ensure an effective independence of the central bank. The authorities have announced their readiness to resolve these issues. Furthermore, a transitional provision of the new constitution allows for a merger of the central bank with the Hungarian Financial Supervisory Authority (HFSA) into a new institution. Although the government indicated that such a merger will not happen until the end of the current governor's mandate, the fact that the central bank governor would become deputy of the new institution is incompatible with the provisions of the Treaty on the Functioning of the European Union, as well as the Statute of the European System of Central Banks.

The financial independence of the HFSA should also be improved to equip it with enough resources to fulfil its mission. A larger budget would allow it to pay more attractive salaries to its employees, which is paramount for retaining the most competent experts and improving the quality of supervision. This is also essential for limiting regulatory capture by the regulated financial institutions. The HFSA authority is funded through supervisory fees and other supervisory income, which is a good sign as it sufficiently ensures its independence from the state budget. However, such turnover-based funding has declined during the crisis by almost 20% due to reduced activity of financial institutions, precisely the period during which the supervisor urgently needed more resources for supervision. In this respect, the provision of past and present acts on the HFSA to allow the institution to create reserves up to 15% of its actual annual revenues should be put into practice.

Asymmetry between host and home regulation should be addressed

In the wake of the crisis, the co-operation between host and home regulators has been strengthened due to the establishment of supervisory colleges. Such co-operation is essential in order to enforce prudential regulation, share information on cross-border loans, contain contagion risks and prepare bank resolutions. The Hungarian authorities often claim to rely on the EU guidelines that are in the process of being designed. While international harmonisation is important, it is equally important to address local particularities, such as the fact that large systemic financial institutions are owned by foreign investors and their regulation and supervision require a very close host-home co-operation. It is unfortunate, for example, that the discussion about bridge banks, where assets and liabilities of distressed banks could be transferred, has stalled. Such a solution would foster market discipline by forcing insolvent banks to fail, but would ensure the continuity of essential banking operations of systemically important banks.

Supervision of foreign subsidiaries can be effectively undermined by the ease with which multinational financial groups could side-step regulatory controls. Facing tighter regulation in Hungary, foreign banks are well placed to provide direct cross-border loans, which would be registered on balance sheets of parent banks, thereby circumventing host regulation and supervision. While this poses no problem from the point of micro-prudential regulation of individual banks, such cross-border lending can contribute to imbalances and threaten financial stability, but there is no way for host regulators to impose macro-prudential regulation on such flows (Pistor, 2010). To avoid such regulatory arbitrage, host and home supervisors should collect and share detailed data on cross-border loans. Moreover, credit bureaus of home and host country should share information on defaulted borrowers given the importance of such credit information sharing for the development of financial intermediation.

Another example of asymmetry between host and home regulation relates to the introduction of Basel II and III, which allow banks to rely on their own empirical risk models to calculate the required capital for credit risk. In the case of international banks, such models should be subject to the assessment and eventual approval by home and host regulator, and the HFSA is involved in such decisions via its participation in supervisory colleges. According to the EU legislation, the application of the internal rating based approach can be different for each entity within an international financial group, and the Hungarian authorities should insist more on a special treatment of foreign subsidiaries based in Hungary. Given the shorter time span of credit risk information, poorer quality of the data and structural breaks, banks should be much more prudent in their reliance on models in Hungary than in developed home countries, such as Austria, Germany or Italy. Importantly, the existence of a long-term comprehensive credit-registry could help authorities to calibrate default probabilities appropriate for the Hungarian market.

Box 2.4. **Policy recommendations to ensure financial stability and efficiency**

Smoothing households deleveraging while avoiding credit rationing

- To avoid moral hazard problems, any debt restructuring programme should be targeted to borrowers with high repayment-to-income ratios and/or negative equity.
- Regulatory forbearance should be avoided and loans that have been restructured (even if they have not yet experienced arrears) should be subject to increased loan loss provisioning to reflect the risk of future losses.
- Replace the exceptional bank levy by a less distortive tax in 2013 and ensure a recapitalisation of banks if needed by recommending banks to retain earnings and raise high-quality new equity.

Improving the efficiency of financial intermediation

- To enhance the disciplining role of credit information sharing, the central registry should be comprehensive and borrowers should not have the right to opt out. Its memory should be lengthened to ten years for defaulted borrowers and to three years for delinquent borrowers who have repaid their loans. The HFSA and the MNB should be allowed to store the information for a longer time for supervision purposes. To foster bank competition, the clause that customers cannot benefit from the 0% closing charges when the early repayment is financed by another credit institution should be dropped.
- To avoid unilateral loan modification and to reduce borrowing costs, transparent rules on setting fixed or varying interest rates should be extended to all loans.
- The discrimination in regulation of mandatory and voluntary pension funds should be lifted.
- Ensure that pension fund members receive information not only about pension fund returns, but also fees and commissions. Charge ratios should be calculated under different scenarios regarding wage growth and investment returns and published by the financial supervisor (HFSA). Ultimately, the authorities should consider simplifying the fee structure by keeping only one fee, either on assets or on contributions.

Enhancing framework conditions of financial stability

- Ensure an effective independence of the central bank.
- Strengthen the financial independence of the HFSA by increasing the level of supervisory fees and eventually accumulating a reserve fund.
- Co-operation between host and home regulation of foreign banks should be improved with a view to improve implementation of prudential regulation, sharing information on cross-border loans and defaulted borrowers, containing contagion risks and preparing bank resolutions.

Bibliography

BIS (Bank for International Settlements) (2011), "Central Bank Governance and Financial Stability: A report by a Study Group", BIS, May.

Bohl, M.T., J. Lischewski and S. Voronkova (2011), "Pension Funds' Performance in Strongly Regulated Industries in Central Europe: Evidence from Poland and Hungary", *Emerging Markets Finance and Trade*, Vol. 47, No. 0.

Brown, M., T. Jappelli and M. Pagano (2009), "Information Sharing and Credit: Firm-Level Evidence from Transition Countries", *Journal of Financial Intermediation*, Vol. 18, No. 2.

Brown, M., S. Ongena, A. Popov and P. Yeşin (2011), "Who Needs Credit and Who Gets Credit in Eastern Europe?", *Economic Policy*, Vol. 26, No. 65, CEPR, CES, MSH.

Claessens, S. and L. Laeven (2004), "What Drives Bank Competition? Some International Evidence", *Journal of Money, Credit and Banking*, Vol. 36, No. 3.

Cukierman, A., S. Webb and B. Neyapti (1992), "Measuring the Independence of Central Banks and Its Effect on Policy Outcomes", *World Bank Economic Review*, Vol. 6, No. 3, World Bank.

ESRB (European Systemic Risk Board) (2011), "Recommendation of the European Systemic Risk Board of 21 September 2011 on Foreign Currency Lending", ESRB/2011/1, ESRB, European System of Financial Supervision, October.

European Commission (2006), "Appointment Procedures in Monetary Policy-Making Bodies", *Briefing Note*, DG Internal Policies of the Union, European Commission.

European Commission (2010), "Financial Sector Taxation", *Taxation Papers*, European Commission.

Gomez Hernandez, D. and F. Stewart (2008), "Comparison of Costs and Fees in Countries with Private Defined Contribution Pension Systems", *Working Paper*, No. 6, International Organisation of Pension Supervisors.

GVH (Gazdasági Versenyhivatal) (2009), "Executive Summary of the Report on the Inquiry into Retail Banking (Examining the Possibilities of Bank Switching)", Hungarian Competition Authority, February.

Hryckiewicz, A. (2009), "Pension Reform, Institutional Investors' Growth and Stock Market Development in the Developing Countries: Does it Function?", *Working Papers*, No. 67, National Bank of Poland.

IMF (International Monetary Fund) (2010), "A Fair and Substantial Contribution by the Financial Sector: Final Report for the G-20", IMF, June.

Larosière, J. de *et al.* (2009), "The High-Level Group on Financial Supervision in the EU (de Larosière Report)", European Commission.

MNB (Magyar Nemzeti Bank) (2011), *Financial Stability Report*, MNB, April.

Molnar, J., M. Nagy and C. Horváth (2007), "A Structural Empirical Analysis of Retail Banking Competition: the Case of Hungary", *MNB Working Papers*, No. 2007/1, Magyar Nemzeti Bank.

Molnár, M. and D. Holló (2011), "How Efficient are Banks in Hungary?", *OECD Economics Department Working Papers*, No. 848, OECD Publishing.

Panzar, J.C. and J.N. Rosse (1987), "Testing for 'Monopoly' Equilibrium", *The Journal of Industrial Economics*, Vol. 35, No. 4.

Pistor, K. (2010), "Host's Dilemma: Rethinking EU Banking Regulation in Light of the Global. Crisis", *Finance Working Paper*, No. 286/2010, European Corporate Governance Institute.

Polgár, E.K. and A. Zdzienicka (2010), "The Effectiveness of Policy Measures to Control Credit Growth in Emerging Europe", unpublished document.

Rothemund, M. and M. Gerhardt (2011), "The European Credit Information Landscape: An Analysis of a Survey of Credit Bureaus in Europe", *ECRI Research Report*, No. 11, European Credit Research Institute.

Sóvágó, S. (2011), "Identifying Supply and Demand in the Hungarian Corporate Loan Market", *MNB Occasional Papers*, No. 94, Magyar Nemzeti Bank.

Tapia, W. (2008), "Comparing Aggregate Investment Returns in Privately Managed Pension Funds: An Initial Assessment", *OECD Working Papers on Insurance and Private Pensions*, No. 21, OECD Publishing.

Tapia, W. and J. Yermo (2008), "Fees in Individual Account Pension Systems: A Cross-Country Comparison", *OECD Working Papers on Insurance and Private Pensions*, No. 27, OECD Publishing.

Trucharte Artigas, C. (2004), "A Review of Credit Registers and their Use for Basel II", *FSI Award 2004 Winning Paper*, Financial Stability Institute, Bank for International Settlements.

ANNEX 2.A1

Determinants of net interest margins in Hungary and its OECD peer group in Central and Eastern Europe

In order to compute the impact of different determinants on net interest margins (NIM), the following equation has been estimated (with the value of parameters, all statistically significant at 5%, presented below):

$$NIM_{it} = \underset{(0.05)}{\alpha_0} + \underset{(0.07)}{\alpha_1 Cap_{it-1}} + \underset{(0.16)}{\alpha_2 LLP_{it-1}} + \underset{(0.03)}{\alpha_3 Costs_{it-1}} + \underset{(0.08)}{\alpha_4 L_{it-1}} + \underset{(0.06)}{\alpha_5 Int_{it-1}} + \underset{(0.05)}{\alpha_6 GDP_{it-1}} + \underset{(0.48)}{\alpha_7 Inf_{it-1}} + \alpha_8 Tax_{it-1} + \varepsilon_{it}$$

where Cap_{it} – is the ratio of equity to total assets, an inverse of a leverage ratio;

LLP_{it} – a ratio of loan loss provisions to total loans to proxy for credit risk;

$Costs_{it}$ – a ratio of operating costs to total assets;

L_{it} – a Lerner index;

Int_{it} – a money market interest rate;

GDP_{it} – GDP growth;

Inf_{it} – CPI inflation;

Tax_{it} – the ratio of taxes paid to total assets.

The model is estimated on a sample of 125 banks in OECD countries of Central and Eastern Europe (Hungary, Czech Republic, Estonia, Poland, Slovak Republic and Slovenia) for 1996-2009, relying on random effect estimation. The data is taken from the *BankScope Database* that provides information on banks' balance sheets and income statements.

The results indicate that better capitalised banks pass the cost of capital to their clients. Higher loan portfolio risk and cost-inefficiency are also compensated by higher margins. Banks with market power succeed to either charge higher lending rates or pay less to depositors. As to macroeconomic environment, economic growth leads to higher margins because it is easier for borrowers to repay their loans, while higher inflation and money market rate lead to higher spreads. There is one percentage point remaining unexplained by macroeconomic environment and banks' financial statements. The other factors that cannot be controlled in the model relate to portfolio composition (currency, maturity, borrower type), cost of regulation, transfer pricing, uncertainty, etc.

Chapter 3

Towards a more inclusive labour market

A rapid decrease in unemployment is a short-term priority to limit social problems and reduce the risk of rising structural unemployment. To this end, strengthening labour market policies to sustain labour demand is key. The public works programme should remain temporary and become more focused on training. The authorities should also refrain from further raising the minimum wage. Fundamental structural reforms are needed in the medium term to raise one of the lowest participation rates in the OECD. This challenge is acute in the context of a rapidly ageing population. The authorities have started restructuring the tax/benefit system to make work pay and increase labour supply, yet additional efforts are needed to foster the inclusiveness of the labour market. Groups which are significantly under-represented in the labour market include the low-skilled, youth, the elderly, women of childbearing age, the disabled and the Roma. Structural measures are needed to develop part-time and other flexible forms of employment, reform family policies, ease the integration of people with disability into the labour market, better attune the education system to labour market needs, enhance the level of qualifications and skills at different ages, diminish disincentives to work at older ages and break the segregation of the Roma.

The crisis and its aftermath have taken a heavy toll on the labour market

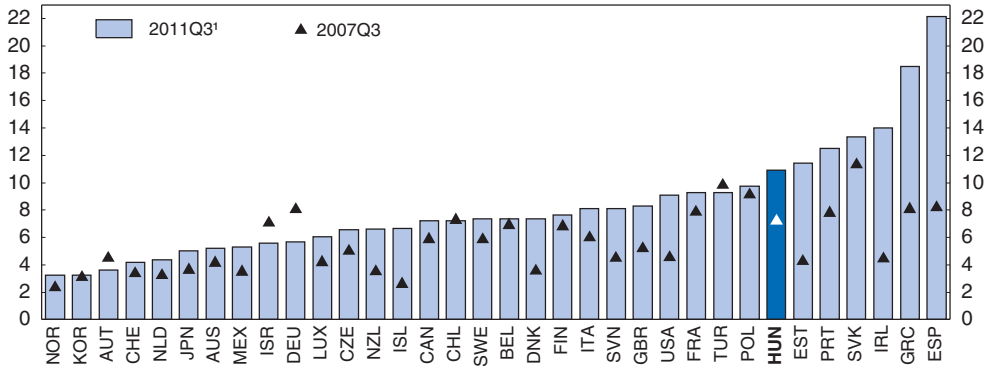
A limited impact of growth on job creation so far

The labour market was significantly affected by the global crisis and the recovery has so far been too weak and allowed only a small fall in joblessness, which exceeds 10%. Further increases are projected to occur in the wake of the recent slide into a double dip recession (Assessment and recommendations, Table 1). Between the third quarter of 2007 and the same quarter of 2011, the total unemployment rate increased by 3.5 percentage points, to close to 11% (Figure 3.1). Low and medium-skilled youth and prime-age workers in the construction and manufacturing sectors took the brunt of the shock, while the employment of older workers actually rose (Figure 3.2). Total hours worked declined less than GDP and, as a result, hourly productivity fell as the output shock was partly absorbed by labour hoarding (de Serres *et al.*, 2012). In the early stage of the crisis, the decline in total hours worked resulted from a fall in employment, but also from an equivalent drop in average hours worked per worker.

Various policy measures and wage adjustments partly offset the initial impact of the crisis on the labour market. In 2009, the adjustment in hours had been favoured by the use of short-time work arrangements (Hijzen and Venn, 2011; OECD, 2010a). The downward flexibility of real hourly wages, which from the real GDP peak to trough dropped more than labour productivity per hour (OECD, 2011a), helped to mitigate the extent of the shock on total hours. In the public sector, a freeze of the wage bill, a cancellation of a supplementary thirteenth-month salary and other cost-cutting measures (implementation of an income ceiling and a revision of one-off payments) contributed to wage moderation in the economy through direct and spillover effects. Labour demand was also supported by a permanent reduction from 32% to 27% of employers' social security contributions.[1] In 2010,

Figure 3.1. **Unemployment rates have increased since the crisis**

Per cent



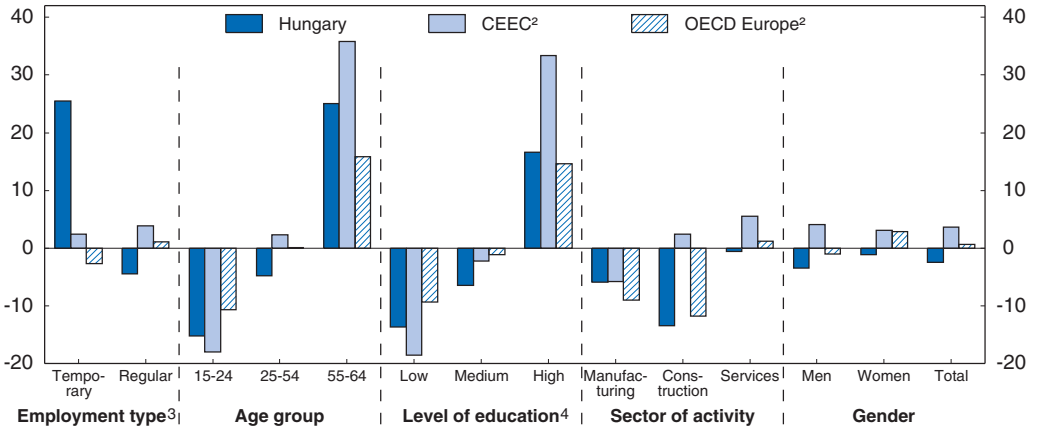
1. 2011Q2 for Ireland and 2010Q4 for Japan.

Source: OECD (2012), *OECD Economic Outlook: Statistics and Projections* (database), January.

StatLink http://dx.doi.org/10.1787/888932576187

Figure 3.2. **The effects of the recession across groups of workers**

Percentage change in employment by workforce group from 2007Q3 to 2011Q3,[1] age 15-64



1. 2008Q3 to 2011Q3 for sector of activity due to the change to NACE Revision 2 classification in 2008.
2. Weighted averages. CEEC covers the following Central and Eastern European countries: Czech Republic, Poland and Slovak Republic. OECD Europe covers all European OECD countries (excluding Turkey by sector of activity).
3. Regular is the difference between temporary employees and total employment.
4. Based on the International Standard Classification of Education (ISCED97): "Low" covers pre-primary, primary and lower secondary levels of education (0-2); "Medium" covers upper secondary including post-secondary non-tertiary education (3-4); and "High" covers tertiary education including advanced research programmes (5-6).

Source: Eurostat (2012), "Labour Force Survey", *Eurostat Database*, January.

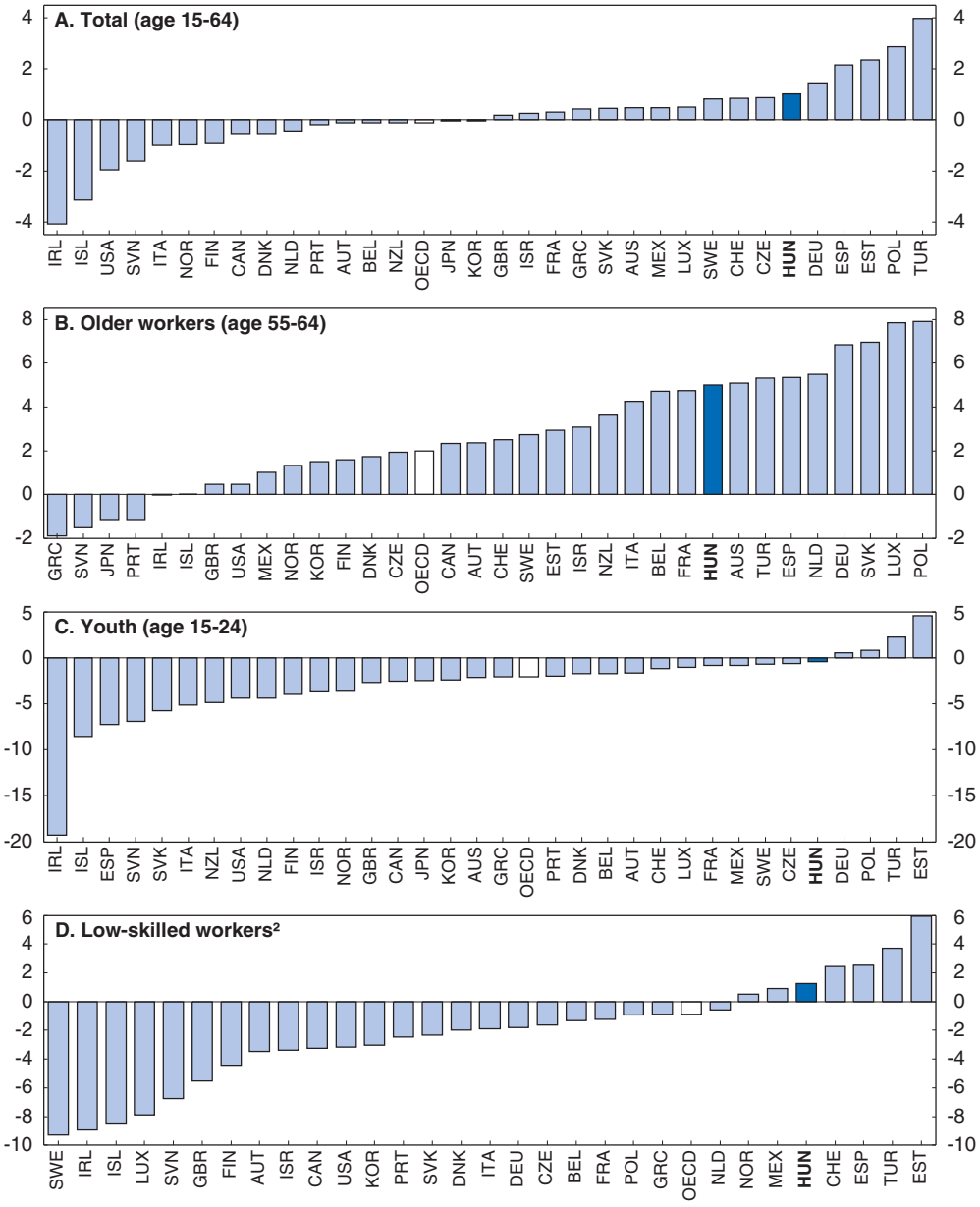
StatLink http://dx.doi.org/10.1787/888932576206

a lump sum employers' health care contribution, which weighed relatively more on low-wage labour demand, was cancelled. Finally, the minimum base for social security contributions set at twice the amount of the minimum wage was abolished in 2011, which provided an additional boost to labour demand. These measures had a positive effect on employment given the high wage-elasticity of labour demand in Hungary (Cseres-Gergely, 2010). According to original official estimates, the above cuts in non-wage costs could have increased private-sector employment by 1.4-1.8% in the medium term.

Sustained high unemployment raises the risks of losses of human capital and discouragement effects, but so far there has been little evidence of labour force withdrawals. Between the third quarter of 2007 and the third quarter of 2011, labour force participation rates showed remarkable resilience as they improved (admittedly, from low levels) for low-skilled workers and increased significantly for older workers (Figure 3.3). Participation of young workers deteriorated only marginally. Possible explanations are that some of those who lost their job did not withdraw from the labour market, inactive second earners re-entered the labour market to offset the impact of job losses of primary earners on family income, while the supply of older workers was enhanced by favourable cohort effects and increases in the retirement age of women. However, the risk of unemployment persistence has also picked up. The incidence of long-term unemployment (measuring the share of people unemployed for 12 months in total unemployment) has inched up close to 50% by the end of 2011 (Assessment and recommendations, Figure 6). Unemployment turnover has diminished and there is empirical evidence that exit rates from unemployment decline with the length of jobless spells (de Serres *et al.*, 2012). In this context, creating conditions for a rapid growth and labour market recovery is one of the main short-term policy priorities in Hungary.

Figure 3.3. **Change in labour force participation rates**

Percentage points, 2007Q3 to 2011Q3[1]



1. 2007Q2 to 2011Q2 for Switzerland. No data is available for Chile.
2. Workers with below upper secondary levels of education, levels 0-2 of ISCED (International standard classification of education). No data available for Australia, Japan and New Zealand.

Source: OECD (2012), *Quarterly Labour Market Indicators Database*, Directorate for Employment, Labour and Social Affairs, January (unpublished data).

StatLink http://dx.doi.org/10.1787/888932576225

Ensuring labour market recovery

Restructuring the public works programme

The authorities have put significant emphasis on direct job creation through public works programmes as a temporary substitute for insufficient labour demand. A large

programme "Pathway to Work" targeted at long-term unemployed (more than 100 000 affected per year) was introduced in early 2009. The aim was to identify those long-term unemployed who had the physical capability to work and make financial support for them conditional on their participation in public works organised by local authorities. The programme was terminated in early 2011. A new public employment scheme has been launched since then (managed by the Ministry of Interior since June 2011), characterised by a higher enrolment rate and a high prevalence of part-time and short-time (2-3 months) employment (220 000 people but 100 000 full-time equivalents in 2011), a fixed budget (of 0.2% of GDP in 2011, around half of the expenditure on the previous programme), and a stronger involvement of local authorities in its funding. There are plans to expand the new programme and related expenditure will be scaled up to 0.5% of GDP in 2012. The objective is to create strong financial incentives to resume work by providing a higher income than social assistance, but a lower one than the minimum wage. Between September and December 2011, unskilled workers could earn 73% of the minimum wage for full-time work and this ratio increased to 77% in 2012.

The programme is essentially centred on low-skilled, low value-added jobs and manual tasks. Even though training to obtain a vocational qualification has been offered to some participants, an insufficient provision of such opportunities is a concern given the participation of disadvantaged groups with depreciated human capital and skills (such as long-term unemployed and former disability pensioners). Moreover, the recent shortening of the duration of unemployment benefits from nine to three months risks increasing inflows to the scheme, especially if other active measures fail to ensure labour market reintegration. Subsidised public sector employment may entrench dependence on such programmes as reduced job search and re-employment support preclude mobility into non-subsidised jobs (OECD, 2010b). Evidence derived from a large number of empirical studies (a meta-analysis) suggests that subsidised public sector employment programmes are the least effective form of active labour market policies, whereas training programmes are associated with positive medium-term impacts (Card *et al.*, 2010). Empirical evidence for Hungary shows that various public works schemes experimented in the past have failed to improve the employability of participants and to provide a foothold in the open labour market (Fleck and Messing, 2010; Budapest Institute 2011a). Therefore, the effectiveness of the public works programme should be fostered by providing significantly scaled up training and skill-upgrading services for participants so as to ease their transition to the primary labour market.

Restructuring the personal income tax system

The previous government implemented cuts in social security contributions and personal income taxes in 2009 and 2010. The current government has favoured reductions in the tax wedge by significantly alleviating the personal income tax burden. In 2011, a flat-rate personal income tax rate at 16% was adopted, cancelling the remaining two tax brackets at 17% (with no tax-free allowance and up to two times the average wage) and 32%. Yet, notwithstanding the employment tax credit, the effective tax rate was 20.3% as employer's social security contributions remained part of the tax base. At the same time, generous tax expenditures were granted to families with children, but employees' pension contributions were hiked from 9.5% to 10% and the amount of the employment tax credit (available up to around the average wage) was reduced from 1.6% of GDP in 2010 to 1.2% of GDP in 2011. Further modifications of the personal income tax system were adopted in

late 2011 to move the effective tax rate closer to the statutory rate in 2012. Employers' social security contributions were excluded from the tax base for earnings below the average wage, the employment tax credit was cancelled, and employees' health care and labour market contributions were increased from 7.5% to 8.5%.

As a result of these tax changes, the tax wedge increased for low-income earners (especially those without children, see Assessment and recommendations, Figure 3) and declined significantly for high-income earners (see also Ladanyi and Kierzenkowski, 2012). Despite the indication of significant positive effects of taxation on the taxable income of high-income earners in Hungary (Bakos *et al.*, 2008; Kiss and Mosberger, 2011), empirical evidence for OECD countries suggests that such effects are mainly due to lower tax evasion and enhanced effort or creativity, but that labour supply could remain unaffected at the hour-work margin for this type of worker (Meghir and Phillips, 2010). Yet this contrasts with the finding by Kiss and Mosberger (2011) of a Hungarian tax reform episode in 2007 that had an impact on labour supply on the intensive margin. At the same time, the increase in the tax wedge on low-income earners creates a risk that they could drop out of employment (or shift to the informal sector). In particular, the scrapping of the employment tax credit is likely to hamper work incentives of low-income workers. The in-work tax credit was well designed, provided a significant incentive to enter the workforce, was paid throughout the year (improving effectiveness compared to schemes with annual payments) and avoided discouraging second earners (being withdrawn on an individual rather than family basis). Finally, the overall net impact of this tax reform on labour supply may be lower than expected once the fiscal measures needed to offset the sizeable budget cost of the introduction of the flat tax are taken into account (Chapter 1).

Even though overall households' incomes increased, more people were left worse off than better off as a result of the tax changes (Benczúr *et al.*, 2011). To offset such unfavourable distributional developments, the government implemented wage compensations in the public sector to preserve nominal net earnings of affected employees and favoured wage increases in the private sector through different channels. *First*, the minimum wage was hiked by 6% in 2011 and 19% in 2012. *Second*, the authorities gave incentives to businesses to increase wages, supported by a law adopted in mid-2011 and effective in January 2012 stipulating an exclusion from public tenders and subsidies for enterprises failing to comply. In practice, the authorities recommended an increase in wages in the private sector of between 4 and 6% in 2011. The recommendation for 2012 was an increase by 5%, with any increase beyond that target (and up to a certain threshold corresponding to the abolished employment tax credit) refunded through cuts in employers' social security contributions. The labour cost of low-income earners will nevertheless increase after the end of 2013 when the complex wage compensation system will cease as currently expected. Yet the impact could be somewhat mitigated with cuts in employers' social security contributions targeted at some low productivity occupations available from 2013 (see below). *Finally*, a temporary scheme compensates those earning above the minimum wage and not befitting from any offsetting wage increase in the private sector in 2012.

Beyond large fiscal costs, negative income distribution effects call into question the sustainability of the flat tax. Preserving elements of redistribution is therefore essential. A re-introduction of the employment tax credit would provide income to low-income earners and enhance work incentives at the same time. The fiscal cost could be lowered by phasing it out from a lower income level than was previously the case, while the problem of

widespread tax evasion and under-reporting of earnings should be addressed by strengthening tax inspections and imposing higher sanctions for tax avoidance. This could be also achieved by keeping a larger tax base for those earning above the average wage by, for instance, not exempting employer social security contributions from gross earnings as currently planned in 2013. Another possibility is to adopt a tax-free income allowance.

Containing the minimum wage

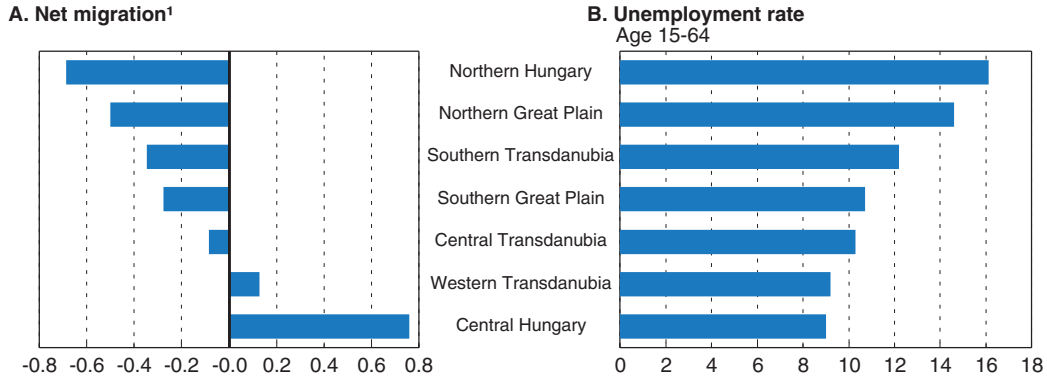
High wage and non-wage labour costs at the minimum wage level could represent important barriers to hiring young and/or unskilled people. Up to recently, this did not seem to be a major concern at the macroeconomic level in Hungary. In 2010, the ratios of the minimum to the median, for both wages and labour costs, were close to the OECD average and only 2-3 percentage points higher than in regional peers (Poland and the Slovak Republic). The ratios were more than 10 percentage points higher than in the Czech Republic, which however had the lowest ratios in the OECD. To encourage skilled labour supply and reduce tax evasion, Hungary also applies a guaranteed minimum wage for workers in jobs requiring at least secondary school or vocational training qualification (OECD, 2010c). Even though entry level wages of young graduates are above the guaranteed minimum wage, this system could reduce labour demand for skilled (older) workers with insufficient productivity. In January 2012, the standard and guaranteed minimum wages were hiked by 19% and 15% respectively, which is likely to hurt labour demand and deteriorate cost competitiveness in the medium term. Therefore, the ratio of the minimum wage to the median wage should be reduced by ensuring that further increases in the minimum wage do not exceed consumer price inflation over an extended period of time.

A permanent reduction of non-wage labour costs at or around the minimum wage could increase incentives to hire low-skilled youth and a new scheme permanently reducing employers' payroll taxes by a third (capped at 9% at the minimum wage) for workers in elementary occupations will be available in 2013. Yet, the experience of France and Belgium suggests mixed effects on employment creation (OECD, 2010d; Gautié and Margolis, 2010). Moreover, such measures could be costly to finance since, partly as a result of large tax evasion and the under-reporting of earnings, as much as 1.2 million Hungarians (representing a third of total employment) report earning the minimum wage according to annual tax record data. Another option would be to introduce a youth sub-minimum wage (in force in 10 out of the 21 OECD countries with a statutory minimum wage). But in the presence of a large pool of inactive youth there is a risk that if the sub-minimum wage is uniformly lowered across the country to below reservation wages, this would further reduce work incentives and discourage labour supply.

Hungary combines strong regional disparities in unemployment rates and low internal labour mobility rates (Figure 3.4). Insufficient labour mobility is partly due to an underdeveloped housing market (a limited rental market and tiny social housing sector) and large regional differences in house prices. The latter create problems of affordability and increase the costs of relocation to more promising labour markets (Gerőházi *et al.*, 2010). The recent shortening of unemployment insurance (job search allowance) from nine to three months and, except for older workers, cancellation of unemployment assistance (job search benefit) previously available up to three months will hamper labour mobility. In this context, the authorities could consider differentiating the nominal minimum wage on a regional basis, as is the case in Canada, Japan, Mexico and the United States. Recent changes in the labour code have allowed for the introduction of such a possibility, which is

Figure 3.4. **Regional migration and unemployment**

Per cent, 2010



1. In per cent of resident population. Net migration is the difference between the number of in-migrants who register into a given administrative unit and the number of out-migrants who register into another administrative unit from a given administrative unit.

Source: HCSO (2011), "Data on Internal Migration", *Dissemination Database* and *Stadat Tables*, Hungarian Central Statistical Office, December.

StatLink http://dx.doi.org/10.1787/888932576244

a welcome step. The minimum wage could be reduced in regions where productivity and living costs are low and where there is room for cuts *vis-à-vis* reservation wages, which would stimulate labour demand without discouraging labour supply.

Reducing employers' social security contributions

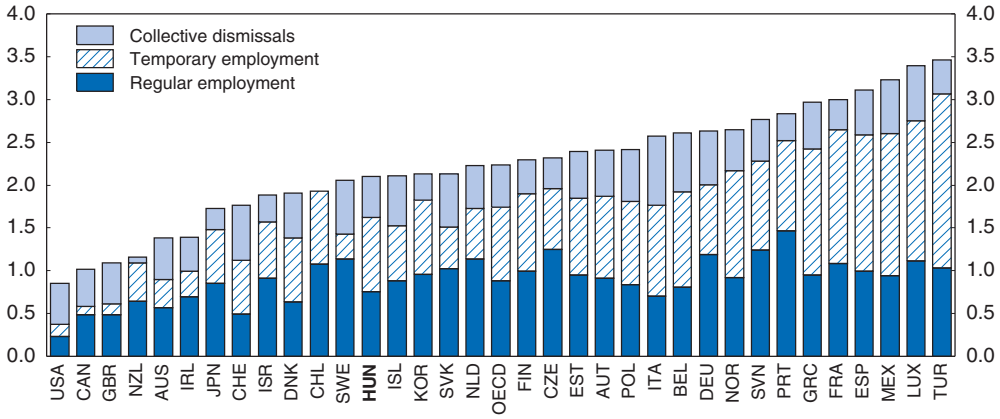
Employers' social security contributions continue to be high in Hungary, at 22% of labour costs in 2010, against an OECD average of 14% (OECD, 2010e). Temporary and targeted cuts in labour costs may also support job creations in the early stages of recovery and overall increases in labour demand (OECD, 2010a; 2011b). Hungary uses various temporary employment subsidies in the form of tax reductions in employers' social security contributions. The "Start programme" providing gross hiring subsidies for the employment of career-starters has been widely used, but an insufficient targeting suggested large deadweight costs (Cseres-Gergely, 2010). However, the level of subsidies has been lowered for high-skilled youth more recently, which is a welcome step. Besides, programmes for parents returning to work after parental leave ("Start plus") and for older, low-skilled or long-term unemployed ("Start extra") appear to be well targeted on disadvantaged groups and should be continued. Both programmes were replaced with a new programme ("Start bonus") with a shorter availability but increased tax allowance in 2012. As opposed to gross hiring subsidies, marginal employment subsidies targeted at raising net employment, such as the "SME+ programme" in Hungary, minimise the risk of displacement effects. Yet maintaining low compliance costs to enhance their take-up rate is important.

Supporting labour market flexibility

Easing employment protection legislation (EPL) could represent another policy lever to stimulate labour demand. The OECD indicator of strictness of EPL does not reveal major hindrances as its overall value was below the OECD average in 2008 (Figure 3.5). Its three main components suggested a relatively flexible approach to collective dismissals, protection of permanent workers and regulation of temporary forms of employment. The

Figure 3.5. **Employment protection legislation**

Index scale of 0-6 from least to most restrictive, 2008[1]



1. 2009 for France and Portugal.

Source: OECD (2010), "Employment Protection Legislation", *OECD Employment and Labour Market Statistics* (database).

StatLink http://dx.doi.org/10.1787/888932576263

authorities amended the labour code in late 2011 to increase further the flexibility of the labour market, notably by easing individual dismissals, except for older workers. On the other hand, the standard length of the probation period has been shortened from three to one month (against an OECD average of four months), which could increase employers' *ex ante* uncertainty about the skills and productivity of young people and therefore hamper their recruitment. However, a longer probation period (up to six months) has been allowed in the case of collective bargaining agreements, which should affect employment in the opposite direction.

Securing appropriate Public Employment Services' (PES) intervention

Non-employed people are a heterogeneous group, which requires a careful profiling of the PES and services targeted to specific needs to limit scarring and hysteresis effects. Job-search assistance is the most cost-effective instrument for those who are assessed as ready to work. A shift from a "work first" to "learn/train-first" approach could be considered for those who have difficulty in finding a job and a low level of education, all the more so as a weak economic recovery lowers the opportunity cost of skill up-grading. More in-depth action is needed in the case of the most disadvantaged groups, who usually cumulate various social risk factors, and may require comprehensive re-employment packages, including remedial education, income support and job-search assistance (including mobility and housing assistance). A threat of moderate benefit sanctions could strengthen the effectiveness of activation measures. The recent tightening of eligibility conditions for unemployment benefits, which have been cut to three months (against an OECD average of 15 months in 2010) and capped at the level of the minimum wage, may have negative social consequences when labour demand is weak, and result in inefficient labour allocation if people do not have enough time to search for a suitable job. This could turn cyclical unemployment into structural, which would call for an extension of the duration of unemployment benefits.

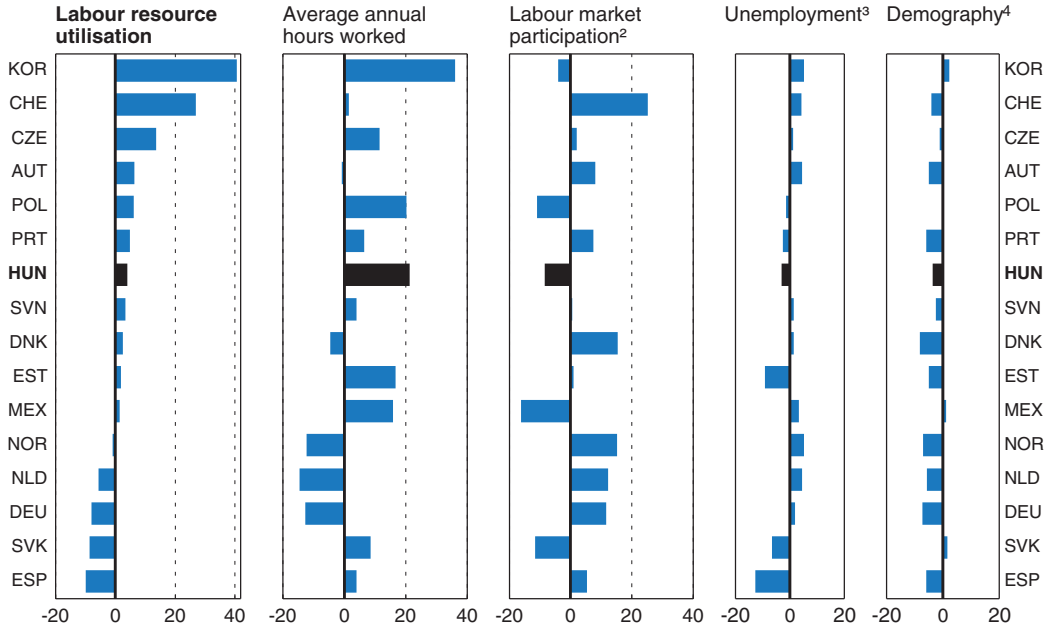
Raising participation rates

Various groups of workers are poorly attached to the labour market

Overall labour resource utilisation in Hungary is comparable to the average of the most affluent OECD countries, but significantly higher average hours worked are compensated for by one of the lowest participation rates in the OECD (Figure 3.6). Therefore, it is not so much a relatively high unemployment rate or a slightly negative demographic structure that prevents higher labour force utilisation, but an insufficient activity rate. Still, since 1997, there has been a steady increase in the labour force and participation rate, driven by a rise in the statutory retirement age, improvements of the education system and changes in the composition of the working-age population towards higher educational attainment (Cseres-Gergely and Scharle, 2010).

Figure 3.6. **The source of differences in labour utilisation in selected OECD countries**

Gap relative to the upper half of OECD countries, 2010[1]



1. Percentage point differences relative to the average of the highest 16 OECD countries in terms of GDP per capita (excluding Luxembourg due to the difficulty of excluding cross-border workers from the breakdown), based on GDP in US dollars at current prices and 2010 purchasing power parities. The sum of the percentage gaps do not add up exactly to the total since the decomposition is multiplicative.
2. Share of labour force in working-age population. The labour force has been calculated as employment divided by 1 less the unemployment rate in order to obtain a labour force consistent with the national accounts employment data.
3. Calculated as 1 less the unemployment rate.
4. Share of working age in total population.

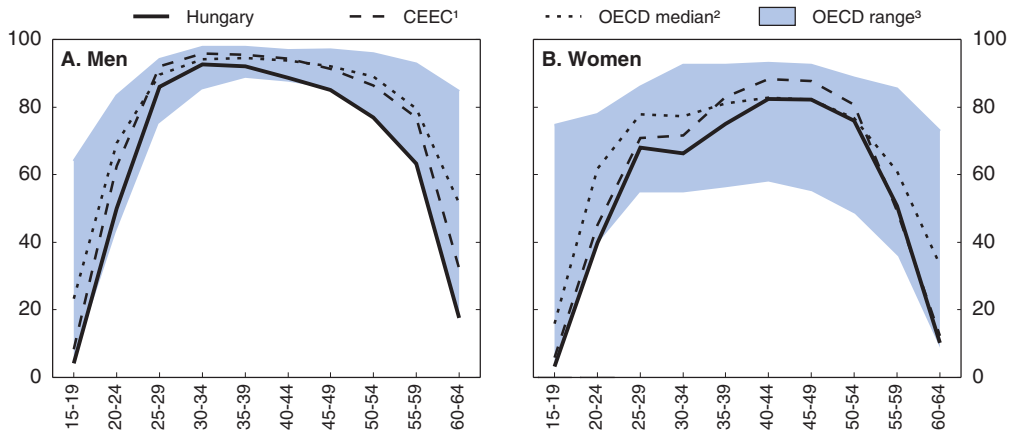
Source: OECD (2011), *OECD National Accounts Statistics* and *OECD Economic Outlook: Statistics and Projections* (databases); and *OECD Productivity Database*, December.

StatLink http://dx.doi.org/10.1787/888932576282

Nevertheless, significant gaps in activity rates remain along various dimensions. When considering a breakdown by age group and gender (Figure 3.7), participation rates are the lowest in the OECD for youth (with a rate below 5% in the 15-19 age group against an OECD average of around 30%) and the age group between 60 and 64 (with a participation

Figure 3.7. **Labour force participation rates by age group and gender**

Per cent, 2010



1. Unweighted average of data for the Czech Republic, Poland and Slovak Republic.
2. Excluding Turkey (outlier for the participation rate of women).
3. Range between the highest and lowest participation rate for each age group among OECD countries excluding Turkey.

Source: OECD (2011), *OECD Employment and Labour Market Statistics* (database), December.

StatLink http://dx.doi.org/10.1787/888932576301

rate at 13.5% as compared with an OECD average of close to 40%). A focus on gender differences indicates that, with the exception of Turkey, the participation rate of men is the lowest in the OECD almost across the whole age range. There is also a significant gap for women of childbearing age *vis-à-vis* the OECD median.

The Hungarian labour market is characterised by low participation rates of those with less than upper secondary education, which for prime-age workers average 60% in Hungary against almost 70% for other Central and Eastern European (CEEC) countries and an OECD median of around 75% (Figure 3.8). The situation is significantly better for graduates with upper secondary and tertiary education. Yet Hungary almost never outperforms the CEEC average or OECD median.

Improving the integration of under-represented groups in the labour market

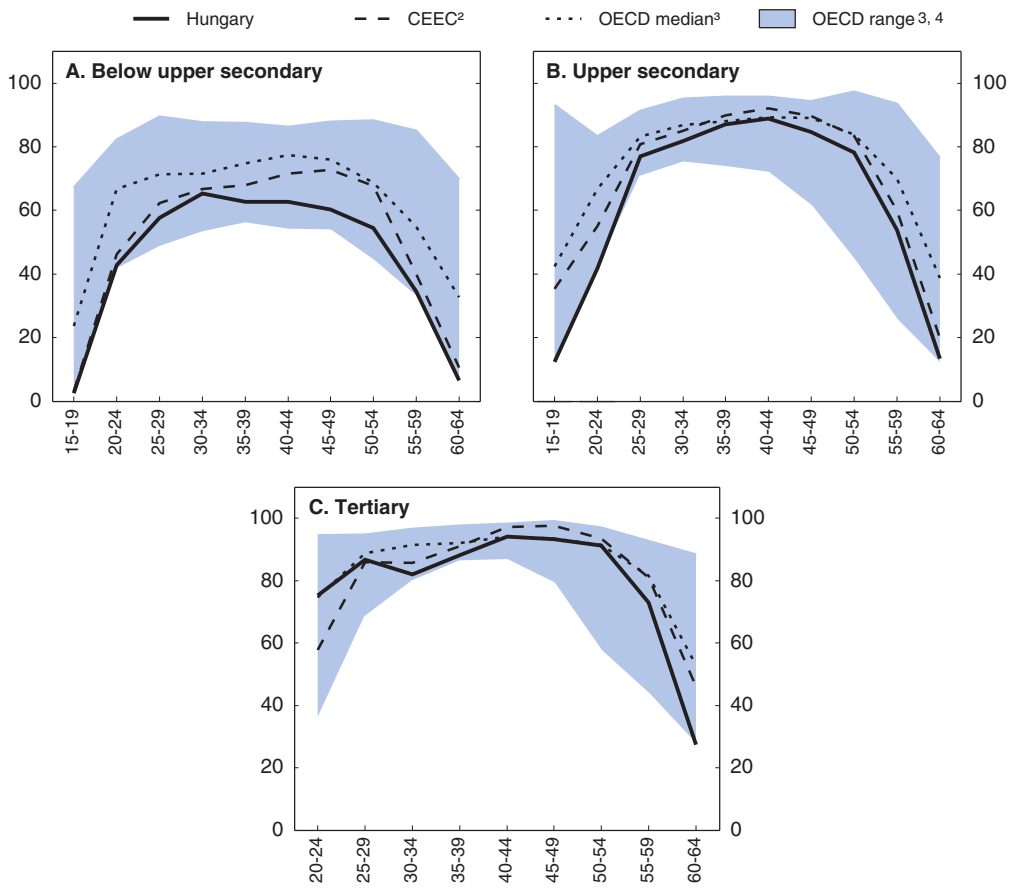
Notwithstanding weak labour demand, various structural factors explain weak activity rates, including: *i)* underdeveloped flexible forms of employment (including part time); *ii)* family policies that do not encourage the labour market participation of women, in particular those with young and/or several children; *iii)* the second highest share of disability benefit recipients in the working-age population in the OECD; *iv)* low overall educational attainment and an education system insufficiently attuned to labour market needs, contributing to youth non-employment; *v)* large disincentives to work at older ages; and *vi)* the widespread labour market exclusion of the Roma. These groups are reviewed in turn in this section.

Fostering the development of part-time employment

Hungary has among the lowest share of part-time work in total employment in the OECD, while other countries with a higher ratio also tend to have higher activity rates (Figure 3.9). In OECD countries, this form of employment is predominantly used by women, who nevertheless prefer substituting part-time to full-time work when aged above 40 and

Figure 3.8. **Labour force participation rates by age group and level of education**[1]

Per cent, 2009



1. Based on the International Standard Classification of Education (ISCED97): Panel A covers pre-primary, primary and lower secondary levels of education (0-2); Panel B includes post-secondary non-tertiary education (3-4); and Panel C includes advanced research programmes (5-6).
2. Unweighted average of data for the Czech Republic, Poland and Slovak Republic.
3. Excluding Chile, Korea and Japan (no data available).
4. Range between the highest and lowest participation rate for each age group.

Source: OECD (2011), *Education at a Glance 2011*.

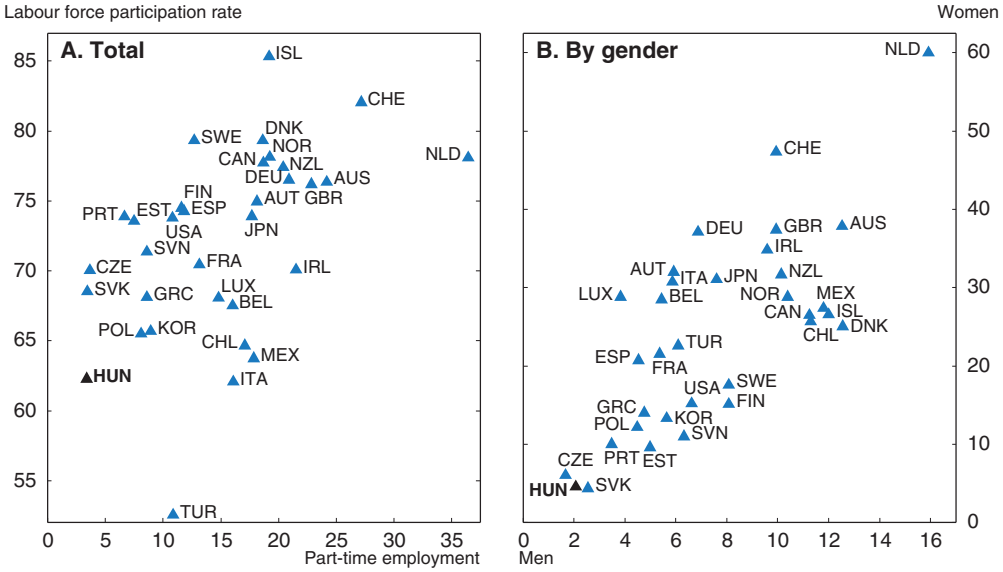
StatLink http://dx.doi.org/10.1787/888932576320

when caring responsibilities for children are less important as a reason for part-time work OECD (2010a). Part-time work provides more opportunities for youth to combine study and work. For instance, it ensures smooth school-to-work transition in Denmark and the Netherlands. Even though the growth of part-time work can be mainly explained by labour supply factors (OECD, 2010a), demand-side factors, such as the shift towards the service sector, play a role as well. Part-time work is low in all low-income OECD countries, which usually have a higher share of industrial production in GDP.

Although the estimated effects of regulation can be rather modest in OECD countries (OECD, 2010a; 2011c), the flexibility of part-time regulation is low for private sector workers and can contribute to a low incidence of part-time work in Hungary. Requests to work part-time can be refused based on any grounds in Hungary (except to care for a child, which is subject to agreement), whereas employers can only refuse on serious business or operational grounds in countries where the prevalence of part-time work is high. Moreover,

Figure 3.9. **Part-time employment**[1]

Per cent, age group 15-64, 2010



1. Part-time employment in per cent of total employment in Panel A, in per cent of total employment for men and women in panel B. Part-time employment refers to persons who usually work less than 30 hours per week in their main job.

Source: OECD (2011), *Labour Force Statistics* (database), December.

StatLink http://dx.doi.org/10.1787/888932576339

there is no obligation for employers to revert to full-time hours on employees' request, while such a possibility is offered in countries with developed part-time work. Even though recipients of childcare benefits are allowed to combine allowances with part-time work, labour legislation should be reviewed by removing any remaining constraints for parents (as is the case in Belgium, France or Netherlands). Yet this could come at a risk of generating adverse effects on labour demand. Compared to full-time employees, the penalty linked to part-time work in Hungary is mainly characterised by weaker opportunities for advancement for women, lower share of permanent contracts and the highest training deficit for both men and women among OECD countries (OECD, 2010a).

Despite associated benefits of developing part-time work, it should be noted that demographic groups with a high propensity for part-time work are also those that are at risk of poor labour force attachment (mothers with caring responsibilities, youth and older workers). The poverty rate among part-time workers is more than three and half times higher than that observed among full-timers in Hungary (OECD, 2010a). This is due to a high proportion of part-time workers who are primary earners, while in-work poverty is significantly lower among part-timers who are second-earners and whose earnings do not represent the main component of household income. Moreover, incentives to take-up part-time work are hampered by a wage distribution skewed to the bottom (implying even lower wages for part-time work in the official sector) and relatively high commuting and administrative costs. Empirical evidence also suggests a positive and statistically significant correlation between the effective retirement age and the incidence of part-time work (OECD, 2006). Chronic capacity shortages in crèches (see below) often lead to the exclusion of young mothers working part-time, which represents another barrier to the development of this form of employment. Finally, developing other flexible work

arrangements (tele-working, distance working, flexible working hours, etc.) may not only have a positive impact on labour force participation, but possibly also promote the development of part-time work.

Reforming family policies to enhance women's labour market participation

Labour participation of women is not only affected by the availability of flexible work arrangements, but is also influenced by the generosity of family policies. In Hungary, family policies are geared toward increasing the fertility rate through high public spending on family benefits and prolonged duration of post-maternity parental leave.[2] However, they have largely failed to boost fertility rates, which started to decline in the late 1970s, collapsed in the early 1990s and stabilised at a low level in the 2000s (OECD, 2007). At 1.33 children per woman in 2009, Hungary had the third lowest fertility rate in the OECD whereas the average was 1.74.

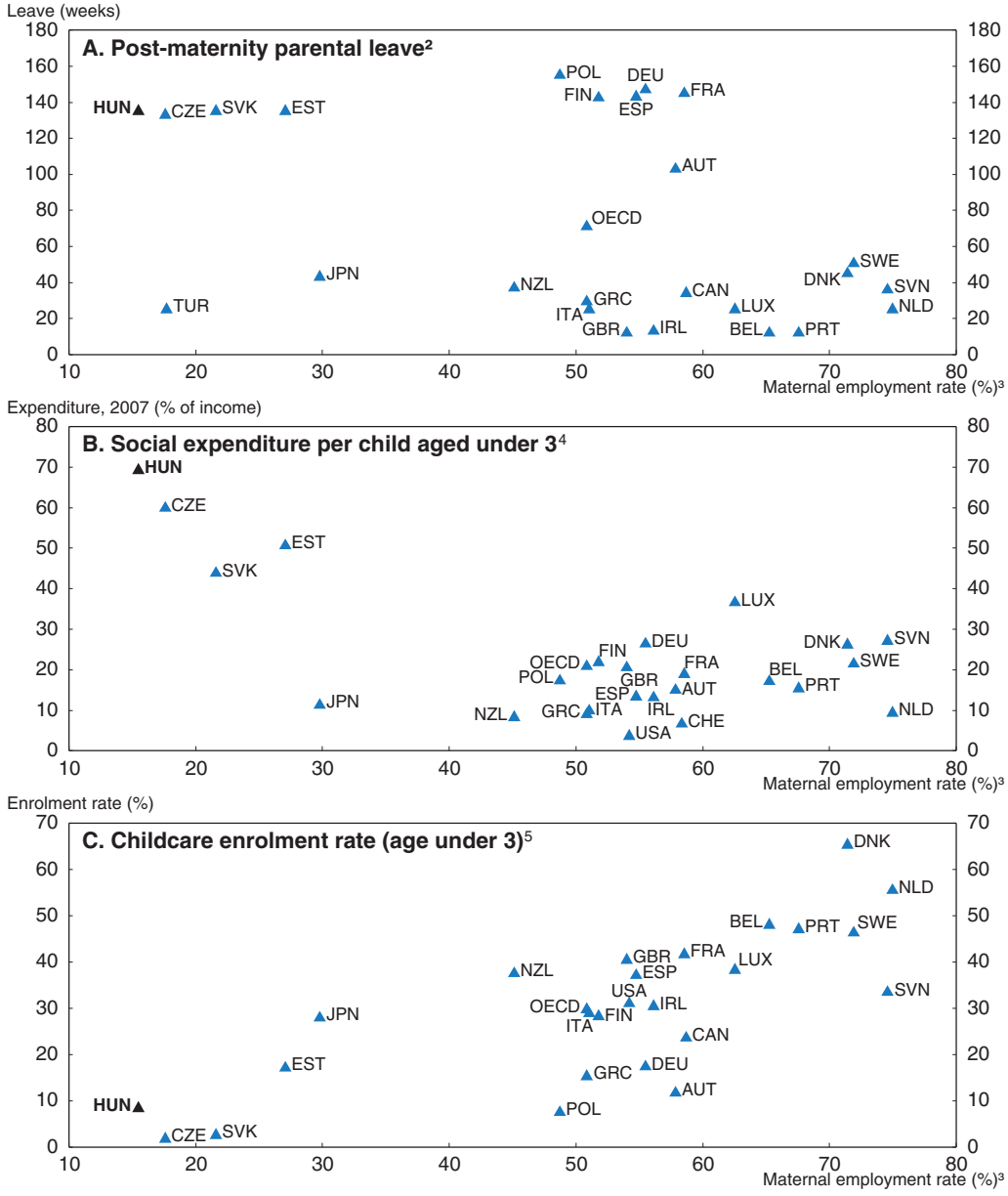
Family policies in Hungary have a significant negative impact on the labour force participation of women with young children. Out of six main leave policy models in Europe, Hungary's model can be characterised as a long-leave, home-centred model (Wall, 2007). Its main feature is maternal home care when the child is very young, with mothers only gradually taking up work again as the child gets older. The model is also characterised by the most generous cash benefits and tax breaks in the OECD per child (further extended in 2011), until the child is three years old (Figure 3.10, Panel B). At the same time, despite some recent progress the availability of early childhood education and care (ECEC) services is still low for children aged under three. In 2008, the enrolment rate amounted to almost 10% against an OECD average of 30% and the EU target of 33% set up by the Barcelona strategy. As a result, at only 15% the employment rate of mothers with children aged under three was the lowest in the OECD, where the average rate was around 50% in 2008.

Policies that favour the reconciliation of work and care responsibilities have a positive effect on fertility patterns, although the composition of family-friendly policies also plays an important role (OECD, 2011c). Empirical research indicates that the link between the duration of leave entitlements and fertility seems ambiguous and small. Financial transfers have a positive, but small and temporary effect on total fertility rates. They mainly accelerate the timing of births. On the other hand, empirical evidence invariably points to a positive effect of formal childcare on fertility patterns. This is a key factor explaining cross-country differences in fertility and is also likely to affect fertility rates on a structural basis. Yet it is more a package of policies (including opportunities to work part-time or flexible workplace practices, leave around childbirth and availability of ECEC services) rather than each single component which has a positive influence on fertility outcomes and intentions.

Best-performing countries in terms of employment outcomes of women with children aged under three combine short post-maternity parental leave with low cash benefits and tax breaks per child. At the same time, they also have high participation rates in ECEC services (Figure 3.10). Therefore, an overhaul of family policies is needed to better combine work and family life and improve the inclusion of women in the labour market. The generosity of post-maternity parental leave should be significantly reduced. From a career development perspective, women would be best advised to return to work no later than around six months after childbirth.[3] At the same time, public expenditure needs to be re-oriented from cash benefits and tax expenditures towards the development of childcare services for children aged under three. A higher availability of ECEC services would also

Figure 3.10. **Maternal employment rates relative to social expenditure, parental leave and childcare**[1]

2008



1. For further information see indicators LMF 1.2, PF 2.1 and PF 3.2 of the *OECD Family Database*; also Figures 2.4 and 4.1 of *Doing Better for Families*.
2. Parental leave and subsequent prolonged periods of paid and unpaid leave women can take after maternity leave to care for young children.
3. Mothers with children aged under 3.
4. Average annual expenditure in per cent of median working-age household income. Expenditure covers cash benefits and tax breaks only and excludes childcare, education and other in kind benefits. Income is the equivalised disposable household income.
5. Enrolment in formal childcare adjusted for intensity of use.

Source: OECD (2011), *Doing Better for Families* and *OECD Family Database* (*www.oecd.org/els/social/family/database*), October.

StatLink http://dx.doi.org/10.1787/888932576358

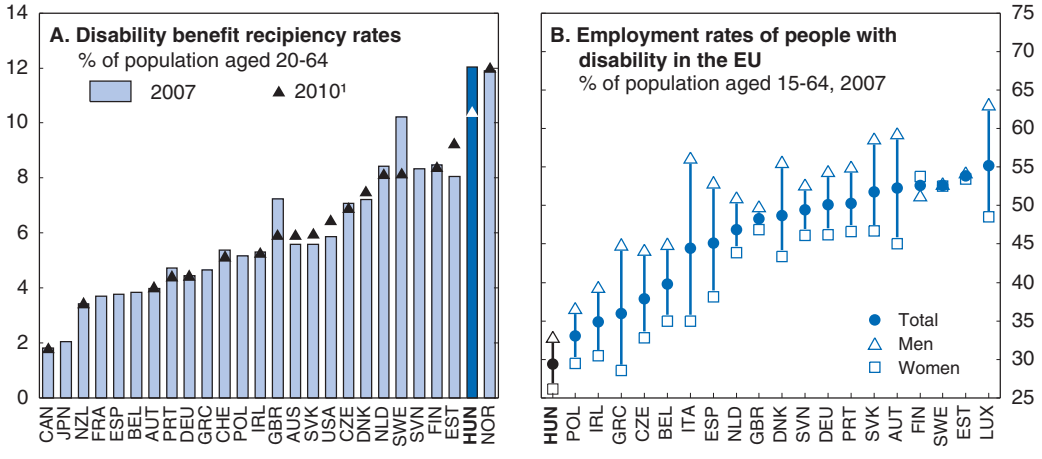
improve the fertility rate. A cost-effective solution could be sought to develop such facilities within railway station buildings in the suburbs of big cities (as recently experimented with in France) or post offices which are often well-located in downtowns. By remaining close to the routes between work and home, this would strengthen accessibility.

Stronger provision of childcare support for children aged under three would remove important barriers to employment for many mothers. A higher provision of ECEC services for children above that age makes it easier to combine work and families. Indeed, at 52% in 2008, maternal employment rates were significantly higher for children aged between three and five. However, the female employment rate was still ten percentage points below the OECD average. Therefore, female employment does not fully catch up with the OECD average when the provision of childcare support becomes more abundant for older children, indicating that the long duration of post-maternity parental leave is likely to make the return to work more difficult. To some extent, a long period of inactivity may have similar negative consequences as long-term unemployment for the probability to take up a job. The fact that women with three or more children may take additional leave and continue to enjoy benefits when staying out of the labour market may explain their second lowest employment rate in the OECD which, at around 25%, was 20 percentage points lower than the OECD average in 2008.

Improving labour market integration of disabled working-age population

Disability benefit systems can steer people into labour market exclusion and welfare dependency (OECD, 2010f). At slightly above 10% in 2010 (age group 20-64), the prevalence of disability benefit recipients in Hungary is one of the highest in the OECD (Figure 3.11). Among the factors which contributed to an upsurge in disability claimants are the rapidly deteriorating health of the population in the second half of the 1960s and the political will to ease the social cost of transition in the 1990s, inducing a *de facto* transformation of disability benefit schemes into an early-retirement route. However, net inflows into disability benefits had been contained in the first half of the 2000s and reversed more recently, notably by

Figure 3.11. **Disability benefit recipients and employment rates of disabled workers**



1. 2009 for the Czech Republic, Germany, Finland, Mexico, Norway, New Zealand, Switzerland and United Kingdom.

Source: OECD (2011), *OECD Employment Outlook 2011* and W. Eichhorst *et al.* (2010), "The Mobility and Integration of People with Disabilities into the Labour Market", *IZA Research Report*, No. 29, Institute for the Study of Labour, October.

StatLink http://dx.doi.org/10.1787/888932576377

altering the system of assessments through streamlined medical guidelines for eligibility (OECD, 2005a; 2011d). Despite still sizeable gross inflow rates into disability benefits of close to 5% in 2008, the main policy challenge now is to reduce the overall number of disability benefit recipients of working age by re-integrating most of them into the labour market. Even though the age distribution is skewed towards older ages, around half of recipients were aged under 54 and a fourth were aged below 49 in 2008.

Only around 25-30% of disabled people work (Figure 3.11) and the unemployment rate is one and a half times higher than for able workers OECD (2010f). About 150 000 people who suffer from sickness or disability would like to work but cannot find a job (Scharle, 2011). While there is a high correlation between the overall level of employment and the employment rate of the disabled, people with disability face greater barriers in the labour market due to various factors (OECD, 2010f; Eichhorst *et al*., 2010). In particular, their job prospects are more sensitive to economic downturns. Promoting flexible forms of employment (part-time work, temporary work, self-employment, distance and teleworking) would enhance work possibilities for people with disability. Employment opportunities are also hampered by a low educational attainment. Lifelong learning programmes would help to narrow the educational gap between disabled and non-disabled. However, other more specific measures are needed as well.

Active labour market expenditure on employment programmes and vocational rehabilitation is very low (OECD, 2010f). In 2008, a rehabilitation allowance was introduced for new claimants of disability benefits who have a good chance of returning to the labour market (based on their health). Recipients of the allowance (paid at a higher level than a standard disability benefit) have to participate in a comprehensive rehabilitation plan designed by the employment office with a view to partially or fully recover their work capacity. However, only people with a health impairment of more than 50% were allowed to participate in comprehensive rehabilitation. Moreover, the experience of OECD countries suggests mixed outcomes from vocational rehabilitation measures notably due to lock-in effects (during the rehabilitation period participants usually do not look for a job, which increases the risk of non-employment). Therefore, vocational rehabilitation measures should be coupled with work-first measures (including job coaching, workplace adaptation, and personal assistance) to limit the period of inactivity and enhance the probability of returning to work.

In 2011, the authorities cut by half the generosity of sickness allowances. Yet sickness absence rates are low and, empirically, a previous sickness benefit spell does seem to increase the probability of receiving a disability benefit in Hungary (OECD, 2010f). While the provision of medical guidelines for doctors has represented a welcome step to curb the inflows, there is still room to improve the rules and the practice of evaluation committees in the examination of disability pension claims (Scharle, 2008). In particular, there should be a more prominent focus on remaining work abilities rather than on health problems. Better exploiting partial work capacity could be achieved by shifting from a medical towards a more social approach to disability. In the case of Austria, the latter is defined notably as an ability to acquire and perform gainful employment and achieve a reasonable and adequate income without social assistance.

To enhance labour demand for the disabled, Hungary applies a quota-levy system whereby firms with more than 25 employees (20 employees before January 2012) are required to employ at least 5% of workers with disability, or are subject to a rehabilitation

tax. In 2010, the amount of the tax was more than quintupled to almost HUF 1 million per year for each employee below the quota. In 2011, the tax base was extended to temporary employment agencies. However, international evidence indicates an uncertain effectiveness of quota systems (Eichhorst *et al.*, 2010). Quota positions are often filled through internal not external recruitment and individuals can be hired into low-skilled and token jobs. Moreover, cream-skimming effects can happen as employers target those who are only moderately disabled, in particular if the quotas are not differentiated according to the levels of disability. Therefore, to enhance the labour demand for people with significant health damage and/or weak earnings potential, such differentiation could be explicitly introduced in Hungary.

Another policy instrument to promote the employment of people with partially reduced work capacity is a system of employment subsidies for sheltered firms and accredited employers.[4] This system absorbs a large share of wage subsidies, but provides employment to only a limited number of people (Scharle, 2011). However, the effective share of disabled workers in such workplaces is often very high, thus perpetuating their segregation. Moreover, incentives for firms to ensure a transition of their workers to unsubsidised jobs in the regular labour market are weak, while workers' rehabilitation activities, professional development and skills tend to be firm specific. There is a weak pathway from sheltered workshops or accredited firms to regular jobs, which induces a risk that subsidised employment becomes a trap for people with more labour potential (Scharle, 2011). Better outcomes could be achieved by promoting new forms of sheltered employment closer to the open labour market (like the social enterprises in France and Finland) or tailoring sheltered jobs to those offered by regular firms (as in the Netherlands). Other options would be to limit the share of people who can stay in sheltered employment indefinitely (as in Norway) or link the financing of such firms to the placement of a certain share of disabled workers (adjusted for work capacity) in the regular labour market. Finally, a recent adoption of tax allowances for employers, who are exempted from social security contributions up to double the minimum wage, may also promote labour demand for disabled workers provided that such incentives are well targeted according to the levels of disability.

Re-employment chances of people with disability could be fostered by relying more extensively on non-governmental organisations. Empirical evidence suggests that, in such cases, reemployment chances are significantly higher compared to disabled workers in sheltered employment, while the best service providers can place between 30% and 50% in unsubsidised positions in the open labour market (Scharle, 2011). However, the accountability of private service providers can be enhanced by creating an outcome-based funding mechanism (as in Australia, Netherlands, United Kingdom or United States), whereby providers are paid based on how many disabled persons they have successfully helped to get back to work. Moreover, cream skimming in the intake phase could be avoided by differentiating fees depending on the degree of disadvantage in the labour market (as in Australia). Funding of such re-employment services could be achieved by reallocating part of expenditure away from wage subsidies for accredited employers, in particular for those failing to place a certain share of disabled workers in the regular labour market.

In 2011, the government announced a large-scale review of disability rights with an objective to bring back into the labour market 110 000 people out of a planned review of 220 000 disability pensioners under the age of 57 (five years before the statutory retirement age). Retesting beneficiaries according to new assessment criteria is a welcome step. The authorities have secured part of labour demand by directly creating jobs within the

framework of the new public works programme. However, as discussed above, for people who remained detached from the labour market over a protracted period of time a comprehensive activation strategy based on extended training, skills upgrading and pre-employment support is needed to reduce the risk of a subsequent shift of public works participants into unemployment or social assistance. Following a retest of the entire caseload of beneficiaries aged below 45, the experience of the Netherlands suggests that about one-third returned to the labour market within 18 months, but partly with special reintegration support offered to this group. Therefore, to maximise re-employment chances in the primary labour market a tailored engagement of public employment services leading to a systematic profiling and identification of those most in need of pre-employment intervention is necessary and should be coupled with the provision of some disability services contracted out to the private sector.

Remedying youth non-employment by reforming the education system

At close to 18%, Hungary had the lowest employment rate of youth aged 15-24 in the OECD in 2010, where the corresponding (weighted average) rate was close to 40% (OECD, 2011d). Weak employment outcomes were driven by a high unemployment rate of around 26.5% (exceeding the OECD average by nearly ten percentage points) (Figure 3.1) and a very low participation rate of around 25% (against an OECD average more than 20 percentage points higher). Besides, almost 12% of those aged 20-24 and 16.5% of those between 25 and 29 were inactive and not in education in 2009 (OECD, 2011e). Therefore, Hungary faces a double challenge: to avoid a further increase in the share of young people disconnected from the labour market and to reduce the high inactivity rate of youth further down the road. Measures to keep in check and adapt the minimum wage to local labour market conditions are important (see above), but reforming the education system is critical as well.

The educational profile of the working-age population is low (a fifth of 25-64 year-olds has no diploma, that is less than an upper secondary education), which creates an additional challenge to increase the overall level of educational attainment and ensure high quality standards (including for general education). This is all the more important as higher qualifications have a positive effect on both employment prospects and wages. However, the education system has to be also more attuned to labour market needs so as to reduce the risk of qualification mismatches. In 2004, almost 30% of workers held jobs in areas unrelated to their field of study (OECD, 2011d). While this may signal some welcome mobility and career development, it may also indicate a mismatch between study choices and labour market needs.

The authorities have lowered the age of compulsory education from 18 to 16, starting from September 2012. Yet it would have been preferable not to introduce such a change and instead encourage young people to stay on at school longer.[5] Young people who leave school at the minimum leaving age without sufficient qualifications are exposed to a high risk of spending a long time out of work during their working life. Another risk is a reduced ability to participate in lifelong learning. These problems are particularly acute in Hungary where the share of under-qualified is very large, even though further skills are acquired outside the formal education sector. More than 50% of workers possess fewer qualifications than required by their job, which is by far the highest ratio in the OECD (OECD, 2011d).[6] In the majority of OECD countries, compulsory education ends at age 16, but in some countries it can be age 18 as in Belgium, Poland, Canada, Netherlands and United Kingdom. However, only the last three countries took positive measures to diversify

educational pathways by alternating study and on-the-job training, notably through part-time vocational education (OECD, 2010d).

Continuing the reform of vocational education and training (VET) is essential to strengthen the job prospects of youth. The shift to a market economy combined with a failure to adapt to rapid changes in labour demand during economic transition have led to a gradual devaluation of VET quality, contributing to poor labour market outcomes of disadvantaged and/or lower-skilled individuals and creating a need for reforms (OECD, 2008a; 2010c). Recent steps by the authorities have included the introduction of a scholarship system in support of apprentices aiming to acquire qualifications for which there is evidence of excess labour demand. In addition, specialised workshop-based education has been brought forward, starting right after primary education (in the 9th grade), as opposed to the previous practice of grade 10 for vocational training schools, and grade 12-13 in the case of vocational secondary schools. Regional Education and Development Councils have been set up to monitor the system of secondary vocational education regionally and reduce skill mismatches. Moreover, additional responsibilities about the overall design, organisation and control have been and are planned to be further delegated to the Hungarian Chamber of Commerce and Industry, which should create conditions to improve the quality and labour-market relevance of the system. Yet any changes in the institutional structure should be subject to close monitoring and assessment as there is evidence that the creation of a network of so-called regionally integrated vocational education centres has proved to be expensive and not very efficient in some cases, even though career guidance was improved (Cseres-Gergely, 2010). The authorities have sought to address this issue and restructure this network with a recently adopted new law on VET.

The employment rate of youth is a growing function of the level of education, and the probability of moving from inactivity to employment rises steadily with the level of educational attainment for both genders (OECD, 2008b). Hungary has the highest earnings premium for tertiary education in the OECD (OECD, 2010g). Moreover, low-skilled youth (without an upper secondary education) had on average an unemployment rate which was more than twice as a high as the unemployment rate of high-skilled youth (with a tertiary education) in 2008. These factors should represent a strong incentive for undertaking tertiary education, but graduation rates are low. While enrolment rates in long cycle theory-based studies ("type A") exceeded 50% and were slightly above to the OECD average, educational attainment was almost ten percentage points below the OECD average in 2008. Short cycle tertiary programmes focusing on practical, technical or occupational skills ("type B") are typically less developed in OECD countries, though they are important for good employment outcomes. Yet their incidence was even lower in Hungary and graduation rates did not exceed 5%, twice as low as the OECD average, in 2008.

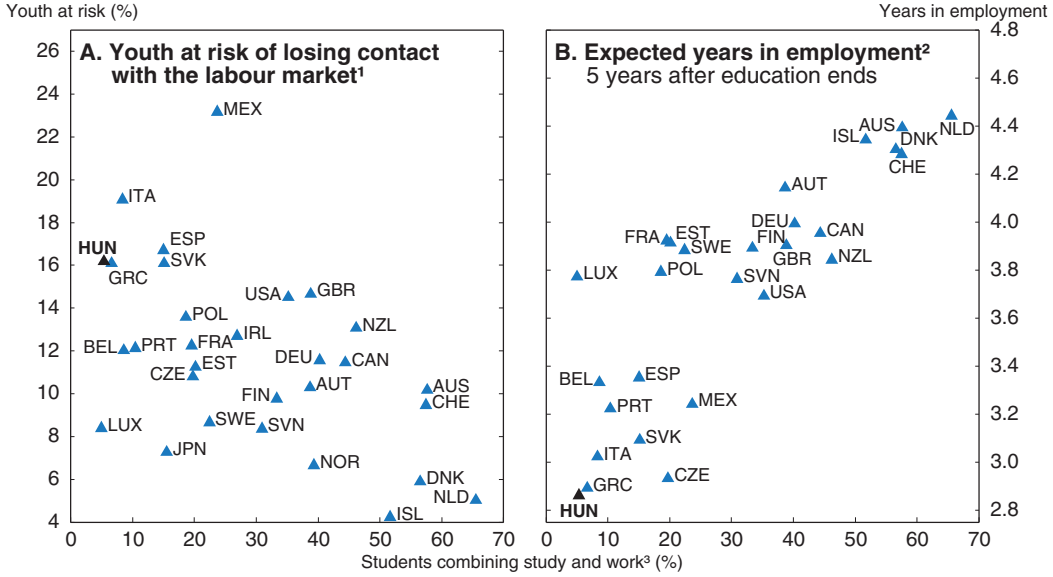
Efforts are needed to continue to expand higher levels of education, but policy action is needed on two fronts to bring them closer to labour market needs. *First*, by enhancing the provision of high-quality post-secondary vocational training and tertiary-type B programmes to help students gaining valuable higher level vocational, technical and professional skills. *Second*, while high failure rates in type A cycles could be due to capacity constraints and biased financial incentives (OECD, 2010c), the structure and quality of educational output are also partly at variance with actual labour market needs, notably due to an insufficient supply of graduates from science, technology and engineering areas (Government of the Republic of Hungary, 2011). A better match between supply and

demand could be achieved by developing career guidance (managed from outside schools) as well as by collecting and publishing information on the labour market outcomes of students. Recent changes aimed at tracking the career development of higher education students are a step in the right direction, but should be backed by a strong and transparent dissemination of information.

Blending learning and working would facilitate the transition from school to work by improving labour-market entry of students and their subsequent career prospects (Figure 3.12, Panel A). In 2008, the median age of 21 of leaving education was equal to the OECD average, but the percentage of students aged 15-29 who combined study and work (including apprenticeships and other work-study programmes) was below 10%, against an OECD average of close to 35% (OECD, 2010d). In the latter report, four groups of OECD countries are identified depending on the relationship between the median age of leaving education and the combination of school and work: "study late while working" in most of the Nordic Countries (except Sweden) and the Netherlands; "study while working" in the Anglo-Saxon countries and Sweden; "study first, then work" in many European countries and Korea; and "apprenticeship systems" in German-speaking countries. Hungary belongs to the third group, where the transition from school to work is abrupt and contrasts with the other groups where more than one-third of students work. A poor labour market integration of new entrants is confirmed by the second lowest level in the OECD for expected number of years spent in employment during the five years after the completion of education (Figure 3.12, Panel B). Post-school labour market outcomes of youth could be

Figure 3.12. **Combining study and work is an effective pathway to enter the labour market**

Age 15-29, 2008



1. Youth who are not in education and are either unemployed or not in the labour force, in per cent of the population of the age group.
2. For details of the calculation see Box 3.2 of *Off to a Good Start? Jobs for Youth*. Data for 2006 for Australia.
3. Youth who are in education and are either employed or following in-work study programmes (including those on apprenticeships), in per cent of the age group in education.

Source: OECD (2010), *Education at a Glance 2010* and *Off to a Good Start? Jobs for Youth*.

StatLink http://dx.doi.org/10.1787/888932576396

enhanced via apprenticeships, compulsory internships and a combination of study and work during the school year to the extent that work is not harmful to studies (*i.e.* no more than 15-20 hours of work a week).

To help young people with college and university degrees start their careers, Hungary developed a programme of "Paid Internship Employment", combining tax incentives for employers and adult mentoring. It has been mainly used in the public sector (Kun, 2010). To boost the amount of workplace training offered by companies, Hungary applies a "train-or-pay" levy, but financial incentives for small and medium enterprises to hire apprentices are low, the administrative burden is large and few foreign companies participate (OECD, 2008a). International experience suggests a mixed effectiveness of such schemes. When designing apprenticeship schemes, a right balance has to be found between different incentives so as to maximise employers' and employees' participation, while ensuring a good quality of workplace training (OECD, 2010h). This implies a relatively low apprenticeship wage (below the minimum wage) rising with the development of skills and productivity, but coupled with a training commitment of the employer (in return for a lower labour cost). However, any development of specialised skills matching specific tasks should not be too firm specific and occur at the expense of a comprehensive provision of sound general literacy and numeracy skills, which are essential to underpin lifelong learning (see below). Otherwise, this could undermine the ability of vocational students to adapt to technological changes and future shifts in labour demand. Deficiencies in broader generic, transferable skills (such as problem-solving and communication) hamper the employment prospects of workers educated in vocational training schools in Hungary (Kézdi *et al.*, 2009). Therefore, adequate support is needed for students facing difficulties to acquire basic skills.

Promoting the participation of the elderly

At nearly 35%, Hungary had the third lowest employment rate of workers aged 55 to 64 in the OECD in 2010, even though it improved by more than ten percentage points over the last decade. If participation rates by age and gender remain unchanged at their current levels, the ratio of inactive population aged 50 and over to the labour force would almost double and exceed one in 2050 (OECD, 2006). What is more, the total inactive population as a share of the labour force would reach a ratio close to two by 2050. Remaining in work longer would have a double dividend as it would: *i)* boost labour force growth and thus help offset the effect of demographic ageing on potential output; and *ii)* improve public finances as a result of lower expenditure on pensions and higher tax revenues.

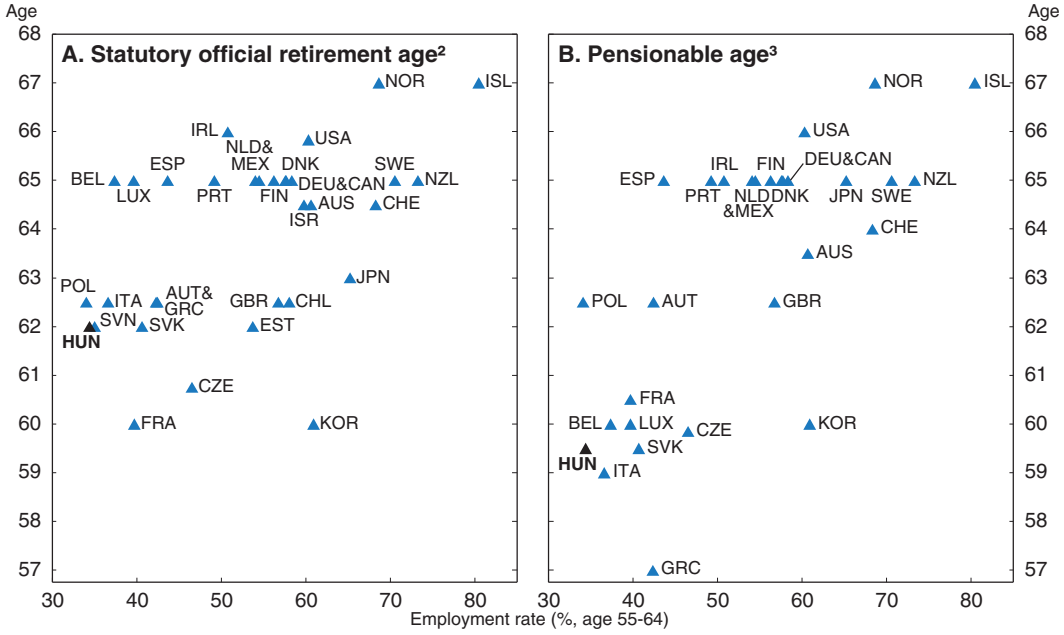
Notwithstanding recent improvements, the disability and old-age pension system provided in the past strong financial incentives for an early exit route from activity, especially for those with weak labour market and insecure wage prospects (Cseres-Gergely, 2007). Moreover, Hungary has a high share of low-qualified workforce in the working-age population and empirical evidence suggests that blue-collar and low-skilled workers are likely to retire earlier than white-collar and more high-skilled workers (OECD, 2006). Even though the participation of future cohorts of older people should gradually increase in line with rising educational attainment, structural measures are needed to increase the employability of current older workers, notably by further reforming the pension system and addressing specific employer and employee barriers on the labour market.

Reforming the pension system

In the second half of the 2000s the authorities made various parametric changes to the first (defined-benefit) pillar of the pension system (OECD, 2010c), which improved work incentives of older workers. Increases in statutory and pensionable[7] retirement ages should enhance the employment rate of older workers (Figure 3.13). In 2002, the legal retirement age was 62 for men and 58 for women. The statutory retirement age for men and women was equalised in 2009 and, starting from 2014, both will be gradually increased to 65 by 2022. Reforms have also tightened the qualifying conditions for early retirement. In 2002, the pensionable age was 60 for men and 55 for women. It reached 59 for women in 2009 and the common pensionable age should converge to the statutory retirement age by 2022. Continuing the reform of the first pillar of the pension system by increasing the statutory retirement age in line with gains in life expectancy, reducing replacement rates and effectively closing pathways into early retirement for women and special pension regimes would also favour longer activity (see Chapter 1).

Figure 3.13. **Employment rates of older workers and retirement age**[1]

2010



1. Retirement ages are unweighted averages of data for men and women.
2. Age at which a pension can be received irrespective of whether a worker has a long insurance record of years of contributions.
3. Age at which people can first draw full benefits (that is, without actuarial reduction for early retirement).

Source: OECD (2011), *Pensions at a Glance 2011*; *Labour Force Statistics* (database) and "Ageing and Employment Policies – Statistics on Average Effective Age of Retirement", September.

StatLink http://dx.doi.org/10.1787/888932576415

Addressing barriers on the side of employers

Some employers may discriminate against older workers due to negative perceptions about their ability to adapt to technological and organisational change. In 2003, Hungary introduced legislation banning age discrimination. Slightly above 3% of workers reported discriminatory practices in 2005, a ratio similar to the average observed in most other EU

countries. A detailed empirical examination reveals the lack of a negative correlation between different subjective measures of age discrimination and the employment rate of older people (OECD, 2011f). Moreover, there is mixed evidence about the effectiveness of public information campaigns in tackling ageism in the workplace. If anything, information campaigns should put emphasis on the benefits of age diversity in the workplace to avoid stigmatising older workers.

At around 1.4 for men in Hungary, the ratio of earnings of 55-59 year-old to 25-29 year-old full-time workers could contribute to weak employability of older workers. Labour market prospects could be hampered if the cost of employing older workers rises more steeply with seniority or age than productivity does. Empirical cross-country analysis reveals a strongly negative and statistically significant relationship between "seniority wages" and hiring rates of older workers, but no obvious linkages with their employment rate (OECD, 2011f; d'Addio *et al*., 2010). However, seniority-wage systems are increasingly unsustainable in the wake of an ageing workforce, making it less possible to offset above-productivity wages of older workers with below-productivity wages of younger workers. Therefore, it is essential that the authorities along with social partners take steps to ensure that wage-setting practices are adapted to the ageing of the workforce. Any seniority clauses in pay arrangements could be replaced by performance clauses as, for instance, has been done in the public sector in Sweden. Korean authorities have encouraged the implementation of a "peak-wage" system with downward wage flexibility after a given age in return for greater job security. Lifelong learning would support the productivity of older workers and prevent the risk of a growing misalignment with their wages (see below). Indeed, empirical evidence suggests a strong positive correlation between training incidence and the retention of older workers relative to younger workers (OECD, 2006).

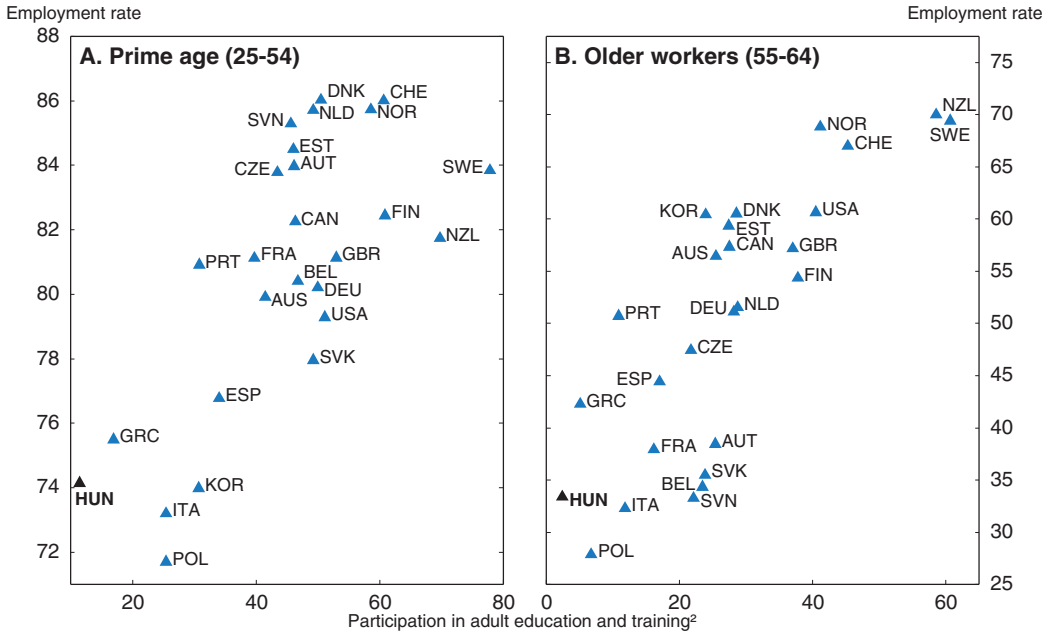
Addressing barriers on the side of older workers

The demands for different skills are subject to constant change under the influence of globalisation, technological progress, work organisation and consumption patterns. Moreover, the closer a catching-up country moves to the technological frontier, the greater the need for sustained adult learning and training to remain competitive. In this context, current and future older workers are exposed to a risk of depreciation of their qualifications and skill obsolescence in the absence of continued investment in adult education and training. Lifelong learning is a key instrument to help to preserve and augment human capital and thus to make older workers more employable. Its incidence declines with age, as a result of a reduced focus of public employment services on the employment of older workers and, more importantly, due to shorter expected pay-back periods on investment in training when the distance to retirement is small (OECD, 2011f). Extending the effective retirement age should raise the potential net returns to training, while the rise in educational attainment of successive cohorts (participation in training is more prevalent for high-skilled than for low-skilled workers) should lead to higher participation.

The participation of the 25-64 year-old population in adult education and training in Hungary is the lowest in the OECD. In the late 2000s it barely reached around 10% for all levels of educational attainment, against an OECD average close to 40% and a 35% average in Poland and the Czech and Slovak Republics. A low incidence of lifelong learning could contribute to a relatively lower employment rate of prime-age workers and to the significant gap in older workers' employment (Figure 3.14). As a result, policies encouraging regular upgrading of skills over the life course appear particularly important for underpinning higher

Figure 3.14. **Lifelong learning and employment rates**

Per cent, 2007[1]



1. 2008 for Belgium, Canada, Czech Republic and Netherlands; 2006 for Denmark, Finland, France, Hungary, Italy, New Zealand, Poland and United Kingdom; 2005 for Sweden and United States.
2. Participation in formal and/or non-formal education in per cent of population in same age group.

Source: OECD (2011), *Labour Force Statistics* (database), December and OECD (2010), *Education at a Glance 2010*.

StatLink http://dx.doi.org/10.1787/888932576434

participation rates among current and future older workers. Yet there are limitations in the effectiveness of such policies for older workers who have had very little training in their work careers. Moreover, the variation by the level of education in terms of participation is sometimes greater than by age, requiring a special focus on low-skilled workers who receive very little adult education and training over their working life. Targeting such workers at mid-career would entrench a learning habit and favour a regular updating of their skills as they age.

Various measures could support the development of adult learning and training by fostering take-up incentives, remedying the under-provision of services and spurring their quality. Reducing the implicit tax on continued work at older ages would not only increase the participation rate of older workers, but should also promote their training participation (Bassanini *et al.*, 2005). In terms of specifics, creating individual learning accounts would give individuals more responsibility and control over their own learning over the life course, while ensuring that various types of learning are adequately tailored to needs (OECD, 2005b). In terms of financing, as adult learning generates private returns it should be co-financed, but low-skilled and low-educated individuals could benefit from a higher state involvement through various types of subsidies (vouchers and allowances). The example of the Czech Republic shows that supply diversity of private providers can be supported by competitive rules for awarding retraining contracts (Bodewig and Hirshleifer, 2011).[8]

Adapting working conditions closer to the needs of an ageing workforce, supporting the health situation of older workers along with health system reforms (see Chapter 4), and encouraging flexible working-time arrangements to allow for a gradual transition to full

retirement (through more flexibility in combining pensions and work) should also underpin longer working lives. Another issue is to increase participation of older workers in active labour market programmes while strengthening job-search requirements, which are usually low for this group of workers in OECD countries. Despite the cancellation of job-search benefit (see above), it is welcome that the authorities have decided to maintain it for those five years away from the legal retirement age. Indeed, once unemployed, the probability of finding a job is significantly lower for the older unemployed than for prime-age and youth workers (OECD, 2006). In this context, it is important to resist pressure on other publicly-supported pathways to early retirement through unemployment, disability and long-term sickness benefits. However, given the major downsizing of social benefits that has recently been implemented, this risk seems low in Hungary.

Tackling the problem of labour market exclusion of the Roma

In Hungary, the Roma represent around 7% of the total population. They suffer from widespread poverty, low access to employment, poor health, discrimination, and social exclusion, not only in Hungary but also in other European countries (European Commission, 2011; World Bank, 2008). The Roma in Hungary enjoyed high labour market participation during the period of the planned economy. Yet the first years of economic transition were marked by a dramatic decline in demand for unskilled labour and the destruction of jobs no longer productive in a market economy, but predominantly filled by the Roma. This led to their widespread non-employment, including significant outflows to disability pensions as an early retirement pathway (see above). By 1994, the gap in employment rates between the Roma and the non-Roma reached almost 40% for both men and women. It remained essentially unaffected by macroeconomic conditions and has widened slightly for both genders since then (Kertesi, 2010).

Various elements drive this employment gap (Kertesi and Kézdi, 2011a). Significantly lower educational attainment of the Roma contributes to at least a third of the gap and its role is increasing over time. Therefore, reducing the education gap is critical to improve the labour market prospects of the Roma. The number of children is an additional explanatory factor for women, partly as a result of relatively generous child-related direct transfers. However, even if many Roma people live in rural and remote areas with few connections to economically important towns and cities, geographic location explains little of the gap when controlling for education. The unexplained part of the employment gap may notably reflect widespread ethnic discrimination as well as unobserved differences in educational quality or content (which are known to be lower for the Roma) and labour supply preferences (for instance, due to differences in reservation wages). Educational differences are also accounting for at least half of the gap in hourly wages.

The Roma face high job insecurity and labour market marginalisation as reflected by a significantly higher unemployment rate, longer jobless spells and less stable jobs as a result of a relatively higher concentration in seasonal employment (in the agriculture and construction sectors) and their wider participation in short-term public employment schemes (Kertesi and Kézdi, 2011a). The latter play a heavy role in Roma employment, but seem to corner Roma workers into a low-level segment of the labour market and entrench their social marginalisation and dependence on such programmes (Kertesi, 2010; Fleck and Messing, 2010).

The Roma are significantly less educated than ethnic populations: 30% of Roma men and close to 45% of Roma women have less than a primary education level, compared with national averages of around 5% and 10%, respectively (Kertesi and Kézdi, 2011a). The education system fails to compensate for disadvantaged family background and does not promote social mobility of the Roma. Roma children have a lower participation in pre-school education, experience a delayed entry to primary school and, despite legal changes, are still more likely to be labelled as mildly mentally disabled and either put into special schools or receive inappropriate education within mainstream schools (OECD, 2010i). These inequities are reinforced by early tracking and a free school choice adopted in 1993. The latter led to a strong sorting by income and ethnicity that coincided with the trend of a growing share of Roma students in primary schools. Empirical research indicates that the segregation of Roma and disadvantaged students between schools is significantly stronger than between classrooms (Kertesi and Kézdi, 2010). The former is also stronger the larger the town and is the most pronounced in areas with the largest presence of Roma and disadvantaged families. This is also supported with data from international assessments (PISA): Hungary is one of the OECD countries where most of the variance in reading performance is observed between schools rather than within them, even after accounting for socio-economic background (OECD, 2010j). As a result, there was a significant test score gap in reading and mathematics between Roma and non-Roma 8th graders in 2006 (Kertesi and Kézdi, 2011b). The gap was mainly explained by parental education and measures of family income and poverty, with health, parenting and the quality of schools operating as key transmission channels. Finally, drop-out rates from secondary education are higher for Roma and only 2-3% of Roma men and women have a secondary or higher education level.

Even though there has been some increase in levels of education among the youngest cohorts of Roma over the recent years, the ethnic gap has in fact increased (Budapest Institute, 2011b). Structural measures are needed to promote access and retention of Roma children in quality education (OECD, 2010c; 2010i). Parents should be encouraged to send their children to pre-school before the compulsory age, which leads to better educational and social outcomes and raises the probability that young children will remain longer in education after the compulsory age limit. Access to pre-school education is key to prevent the initial learning gaps that increase educational segregation between Roma and non-Roma. Establishing home-school liaison co-ordinators to facilitate contacts between teachers, families and communities would also foster parental engagement in educational outcomes (OECD, 2010k). Additional welcome measures would include: *i)* strengthening teacher education for diversity; *ii)* encouraging the mixing and integration of Roma and non-Roma pupils across and within schools; *iii)* postponing early tracking in academic or vocational schools until after 9th grade; *iv)* providing learning support for Roma children lagging behind that should not be addressed by putting them in special schools (which actually widens the gap), but providing them with adequate and timely support in mainstream education; and *v)* merging vocational training schools with vocational secondary schools. The former type of school contributes to the low social mobility of Roma (almost two-thirds of Roma children in post-primary education attend this type of school) and are characterised by five to six times higher dropout rates, and two and a half to three times higher grade retention rates than vocational secondary schools or academic secondary schools (Kézdi *et al*., 2009). Moreover, closing the skills gap among Roma adults will require the development of an employment activation policy based on systematic

skills upgrading and enhanced second-chance education to foster basic skills. However, careful targeting is needed as the more complex and long-term the employment programmes are (including training and the provision of other services), the lower the rate of Roma among participants (Fleck and Messing, 2010).

Box 3.1. **Recommendations to foster labour market inclusiveness**

Ensuring labour market recovery

- Restructure the public works programme by significantly scaling up training and skill-upgrading services.
- Reduce the level of nationwide minimum wage relative to the median wage over time and consider differentiating it across regions depending on local labour-market conditions.
- Re-introduce the employment tax credit, while the fiscal cost could be lowered by phasing it out from a lower income level than was previously the case.

Fostering the development of part-time employment

- Ease regulation by allowing employers fewer grounds for refusal of part-time work and granting a right to automatically revert to full-time employment.

Reforming family policies to enhance women's labour market participation

- Overhaul family policies by significantly reducing the length of post-maternity parental leave and re-orienting public spending from cash benefits and tax expenditures towards the development of high-quality early childhood education and services for children aged under three.

Improving labour market integration of disabled working-age population

- Implement the plan to redirect disability pensioners aged below 57 back to the labour market, but design a comprehensive activation strategy based on extended training, skills upgrading and pre-employment support for people losing eligibility rights.
- Consider contracting out to the private sector the provision of reemployment services, supported by an outcome-based funding mechanism.

Remedying youth non-employment by reforming the education system

- Continue to raise educational attainment and diversify educational pathways by alternating study and on-the-job training through apprenticeship programmes and compulsory internships.

Promoting the participation of the elderly

- To sustain labour productivity, promote the development of lifelong learning starting at mid-career and ensure its persistence by creating individual learning accounts and enhancing take-up incentives of low-skilled and low-educated workers through public subsidies (vouchers and individual allowances).

Tackling the problem of the labour market exclusion of the Roma

- Raise Roma's youth educational outcomes by increasing their participation in high-quality pre-school education, postponing early tracking, and providing learning support for children lagging behind.
- Encourage the mixing of Roma and non-Roma pupils across and within schools.
- Merge vocational training schools with vocational secondary schools.

Notes

1. As of mid-2009, employers' contributions were cut for wages less than double the minimum wage and further extended to all wage levels at the beginning of 2010.
2. The maximum length of maternity and post-maternity leave was re-extended by one year to three years in mid-2010, after it had been cut back by the previous government a year earlier.
3. Leave shorter than six months may also induce negative effects on children's cognitive outcomes, but the evidence on this is mixed (OECD, 2011c).
4. Sheltered firms also require accreditation, but qualify for higher subsidies.
5. The school-leaving age was raised from 16 to 18 at the end of the 1990s in order to reduce the number of early school leavers.
6. This result for Hungary is mainly driven by a large share of workers with below-secondary qualifications in craft occupations.
7. The pensionable age is the age at which people can first draw full benefits without an actuarial reduction for early retirement.
8. Moreover, the labour market orientation of public VET schools has been enhanced by turning some of them into "lifelong learning centres" and allowing them to compete with private providers in the adult education and training market.

Bibliography

Addio, A. d', M. Keese and E. Whitehouse (2010), "Population Ageing and Labour Market", *Oxford Review of Economic Policy*, Vol. 26, No. 4.

Bakos, P., P. Benczúr and D. Benedek (2008), "The Elasticity of Taxable Income: Estimates and Flat Tax Predictions Using the Hungarian Tax Changes in 2005", *MNB Working Papers*, No. 2008/7, Magyar Nemzeti Bank.

Bassanini, A., A. Booth, G. Brunello, M. De Paola and E. Leuven (2005), "Workplace Training in Europe", *IZA Discussion Papers*, No. 1640, Institute for the Study of Labor.

Benczúr, P., G. Kátay, Á. Kiss, B. Reizer and M. Szoboszlai (2011), "Analysis of Changes in the Tax and Transfer System with a Behavioural Microsimulation Model", *MNB Bulletin*, October, Magyar Nemzeti Bank.

Bodewig, C. and S. Hirshleifer (2011), "Advancing Adult Learning in Eastern Europe and Central Asia", *Social Protection Discussion Papers*, No. 1108, World Bank.

Budapest Institute (2011a), *The Efficiency of Municipal Public Works Programmes*, Budapest Institute for Policy Analysis, August.

Budapest Institute (2011b), *Background Material for an EU Roma Strategy Framework: Hungary*, Budapest Institute for Policy Analysis, March.

Card, D., J. Kluve and A. Weber (2010), "Active Labour Market Policy Evaluations: A Meta-Analysis", *The Economic Journal*, Vol. 120, No. 548.

Cseres-Gergely, Z. (2007), "Inactivity in Hungary – The Persistent Effect of the Pension System", *Budapest Working Papers on the Labour Market*, No. 2007/1, Institute of Economics, Hungarian Academy of Sciences.

Cseres-Gergely, Z. (2010), "EEO Review: Youth Employment Measures, 2010, Hungary", European Employment Observatory, October.

Cseres-Gergely, Z. and A. Scharle (2010), "The Hungarian Labour Market in 2008-2009", in K. Fazekas, A. Lovász and Á. Telegdy (eds.), *The Hungarian Labour Market: Review and Analysis*, Institute of Economics, Hungarian Academy of Sciences and National Employment Foundation.

Eichhorst, W., M. Kendzia, J. Knudsen, M. Hansen, B. Vandeweghe, I. Vanhoren, E. Rückert and B. Schulte (2010), "The Mobility and Integration of People with Disabilities into the Labour Market", *IZA Research Reports*, No. 29, Institute for the Study of Labour.

European Commission (2011), *An EU Framework for National Roma Integration Strategies up to 2020*, COM(2011)173/4, European Commission.

Fleck, G. and V. Messing (2010), "Transformations of Roma Employment Policies", in K. Fazekas, A. Lovász and A. Telegdy (eds.), *The Hungarian Labour Market: Review and Analysis 2010*, Institute of Economics, Hungarian Academy of Sciences and National Employment Foundation.

Gautié, J. and D. Margolis (2010), "L'impact de la politique publique sur le marché du travail à bas salaire : offre, demande et qualité de l'emploi", *Économie et Statistique*, No. 429-430, Institut national de la statistique et des études économiques.

Gerőházi, É., J. Hegedüs and E. Somogyi (2010), *Study on Housing Exclusion: Welfare Policies, Housing Provision and Labour Markets. Country Report for Hungary*, Metropolitan Research Institute, May.

Government of the Republic of Hungary (2011), *National Reform Programme of Hungary: Based on the Széll Kálmán Plan*, April.

Hijzen, A. and D. Venn (2011), "The Role of Short-Time Work Schemes during the 2008-09 Recession", *OECD Social, Employment and Migration Working Papers*, No. 115, OECD Publishing.

Kertesi, G. (2010), "Roma Employment at the Turn of the Millenium. An Analysis of the Nationwide Representative Rome Survey of 2003", in K. Fazekas, A. Lovász and A. Telegdy (eds.), *The Hungarian Labour Market: Review and Analysis 2010*, Institute of Economics, Hungarian Academy of Sciences and National Employment Foundation.

Kertesi, G. and G. Kézdi (2010), "Segregation of Primary Schools in Hungary. A Descriptive Study Using Data from the National Assessment of Basic Competences of 2006", in K. Fazekas, A. Lovász and A. Telegdy (eds.), *The Hungarian Labour Market: Review and Analysis 2010*, Institute of Economics, Hungarian Academy of Sciences and National Employment Foundation.

Kertesi, G. and G. Kézdi (2011a), "Roma Employment in Hungary After the Post-Communist Transition", *Economics of Transition*, Vol. 19, No. 3.

Kertesi, G. and G. Kézdi (2011b), "The Roma/Non-Roma Test Score Gap in Hungary", *American Economic Review*, Vol. 101, No. 3.

Kézdi, G., J. Köllő and J. Varga (2009), "The Failures of 'Uncertified' Vocational Training", in K. Fazekas and J. Köllő (eds.), *The Hungarian Labour Market: Review and Analysis 2009*, Institute of Economics, Hungarian Academy of Sciences and National Employment Foundation.

Kiss, Á. and P. Mosberger (2011), "The Elasticity of Taxable Income of High Earners: Evidence from Hungary", *MNB Working Papers*, No. 11, Maygar Nemzeti Bank.

Kun, A. (2010), "National Youth Employment Programmes in Hungary", in R. Blanpain, W. Bromwich, O. Rymkevich and S. Spattini (eds.), *Labour Productivity, Investment in Human Capital and Youth Employment: Comparative Developments and Global Responses*, Bulletin of Comparative Labour Relations, Kluwer Law International.

Ladanyi, T. and R. Kierzenkowski (2012), "Work Incentives and Recent Reforms in Tax and Benefit Systems in Hungary", *OECD Economics Department Working Papers*, No. 944, OECD Publishing.

Meghir, C. and D. Phillips (2010), "Labour Supply and Taxes", *The Mirrlees Review*, Institute for Fiscal Studies.

OECD (2005a), *OECD Economic Surveys: Hungary 2005*, OECD Publishing.

OECD (2005b), *Promoting Adult Learning*, Education and Training Policy, OECD Publishing.

OECD (2006), *Live Longer, Work Longer*, OECD Publishing.

OECD (2007), *OECD Economic Surveys: Hungary 2007*, OECD Publishing.

OECD (2008a), *Learning for Jobs Review of Hungary*, OECD Reviews of Vocational Education and Training, OECD Publishing.

OECD (2008b), "Off to a Good Start? Youth Labour Market Transitions in OECD Countries", in *OECD Employment Outlook 2008*, OECD Publishing.

OECD (2010a), *OECD Employment Outlook 2010: Moving beyond the Jobs Crisis*, OECD Publishing.

OECD (2010b), "Supporting Labour Demand", *Position Paper*, OECD, July.

OECD (2010c), *OECD Economic Surveys: Hungary 2010*, OECD Publishing.

OECD (2010d), *Off to a Good Start? Jobs for Youth*, OECD Publishing.

OECD (2010e), *Taxing Wages 2010*, OECD Publishing.

OECD (2010f), *Sickness, Disability and Work – Breaking the Barriers: A Synthesis of Findings across OECD Countries*, OECD Publishing.

OECD (2010g), *Education at a Glance 2011: Highlights*, OECD Publishing.

OECD (2010h), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing.

OECD (2010i), "Hungary at a Glance: Policies for a Sustainable Recovery", internal document.

OECD (2010j), *PISA 2009 Results: Overcoming Social Background: Equity in Learning Opportunities and Outcomes (Volume II)*, PISA, OECD Publishing.

OECD (2010k), *Closing the Gap for Immigrant Students: Policies, Practice and Performance*, OECD Reviews of Migrant Education, OECD Publishing.

OECD (2011a), *OECD Economic Surveys: Sweden 2011*, OECD Publishing.

OECD (2011b), *OECD Economic Outlook*, Vol. 2011/1, OECD Publishing.

OECD (2011c), *Doing Better for Families*, OECD Publishing.

OECD (2011d), *OECD Employment Outlook 2011*, OECD Publishing.

OECD (2011e), *Education at a Glance 2011: OECD Indicators*, OECD Publishing.

OECD (2011f), *Pensions at a Glance 2011: Retirement-income Systems in OECD and G20 Countries*, OECD Publishing.

Scharle, Á. (2008), "A Labour Market Explanation for the Rise in Disability Claims", in K. Fazekas, Z. Cseres-Gergely and Á. Scharle (eds.), *The Hungarian Labour Market: Review and Analysis 2008*, Institute of Economics, Hungarian Academy of Sciences and Hungarian Employment Foundation.

Scharle, Á. (2011), "The Efficiency of Employment Rehabilitation Subsidies in Hungary", *Policy Brief*, No. 1, Budapest Institute for Policy Analysis.

Serres, A. de, F. Murtin and C. de la Maisonneuve (2012), "Tackling Unemployment in a Weak Post-Crisis Recovery: Policies to Facilitate the Return to Work", *OECD Economics Department Working Papers*, OECD Publishing, forthcoming.

Wall, K. (2007), "Leave Policy Models and the Articulation of Work and Family in Europe: A Comparative Perspective", in P. Moss and K. Wall (eds.), *Employment Relations Research Series*, No. 80, International Review of Leave Policies and Related Research 2007, Department for Business Enterprise and Regulatory Reform.

World Bank (2008), "Czech Republic: Improving Employment Chances of the Roma", *Report*, No. 46120-CZ, World Bank.

Chapter 4

Improving health outcomes and system

Based on the latest available data up to 2009, the health status of the Hungarian population is among the poorest in the OECD, including countries with a similar level of income per capita. While this outcome has been driven by the socio-economic status of the population and lifestyle risks, it also reflects the relatively limited effectiveness of the health care system, for which relatively low levels of resources have been available: total health spending amounted to 7.4% of GDP in 2009, lower than in other OECD countries with similar levels of income per capita. Although the health care system is generating significant health care outputs, such as doctor's consultations and hospital discharges, problems with the quality of health services and the need to reallocate resources where they would contribute most to health outcomes suggest a need for reforms. Reforms are needed to address immediate challenges to stem the outflow of health care workers, reorganise care capacities, align incentives faced by providers and patients, and improve access to health care services. The medium-term challenge for the health care system is to increase available resources to significantly enhance health outcomes. As there are relatively weak mechanisms to regulate quality and prevent unnecessary care, further improving efficiency is also of key importance.

Health outcomes are an important determinant of well-being and, along with the efficiency of the health system, are intricately linked to economic outcomes. Healthy individuals are likely to enjoy longer and more productive lives and invest in their human capital, thus boosting the growth prospects of an economy. By contrast, in Hungary, excess mortality among the working-age population, driven mainly by cancer mortality, has been a drag on growth. Rising health care spending levels has become a cause for concern in the aftermath of the crisis, particularly in view of long-term pressures stemming from population ageing and long-term cost pressures. Although public spending on health in Hungary, at slightly above 5% of GDP in 2009 (total spending reached 7.4% of GDP), is not high in international comparison, limited fiscal space and the need to improve the delivery of health care services have heightened the urgency for reforms. In the following sections, after providing an overview of the health status of the population and its determinants (including those not directly associated with the health system), the performance of the health system is assessed in terms of outputs, including the number of doctor's consultations and hospital discharges, and health outcomes, as measured by mortality and longevity indicators. The final section suggests various reforms of the health system with potentially large impacts on its efficiency and cost-effectiveness.

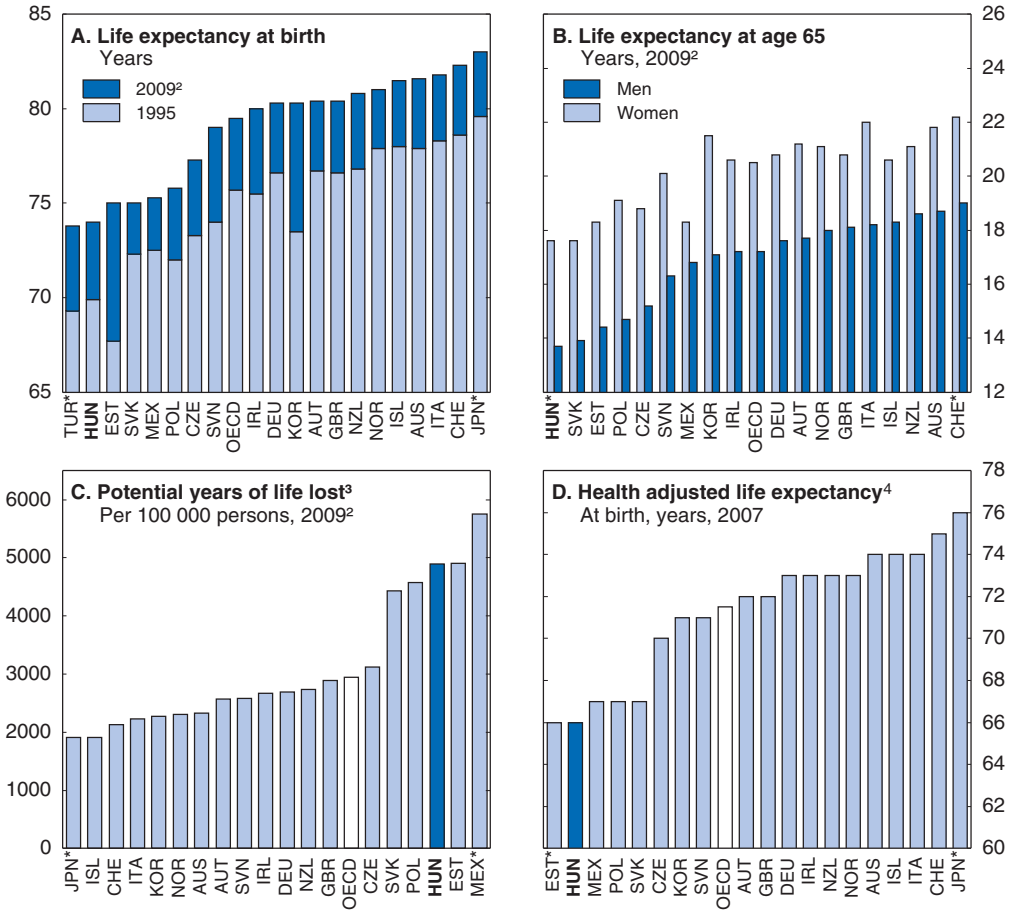
Health outcomes are generally poor

The overall health status of the Hungarian population is weak

Existing mortality and longevity indicators consistently show that there is a wide gap between the health outcomes in the majority of OECD countries and Hungary. Both health-adjusted[1] and raw life expectancies at birth are among the lowest across the OECD and about six years less than OECD averages (Figure 4.1). In terms of potential years of life lost (PYLL),[2] Hungary was ranked among the countries with the highest number in the OECD. Infant mortality was also above the OECD average in 2009 (Table 4.1). Similarly, Hungary was among poorly performing countries in terms of indicators that, unlike longevity indicators, try to account for quality of life improvements above and beyond gains in life expectancy. Based on health-adjusted life expectancy (HALE) and disability-adjusted life expectancy (DALE), Hungary ranks at the bottom of OECD countries. The gap relative to the OECD average in health-adjusted life expectancy was wider than that in life expectancy at birth, reflecting the prevalence of diseases or disability in Hungary (Joumard *et al.*, 2010).

The transition process had a marked influence on health status in Hungary. In particular, mortality rose among middle-aged men, who were more prone to mortality and morbidity in the economically tumultuous earlier periods of the transition process (Kopp, 2007). Life expectancy at birth stalled for women and decreased by around a year and a half for men between 1988 and 1993 and has seen a steady increase since then, largely on account of a decrease in the cardiovascular mortality rate. While this improvement is considered as a beginning of a new phase (Józan, 2009), the gap in life expectancy at birth relative to other OECD countries remains sizable. Also, the increasing risks of mortality

Figure 4.1. **Life expectancy indicators**[1]



1. The OECD aggregate is an unweighted average of data available. An asterisk indicates the lowest or highest value amongst OECD countries.
2. Or latest year of data available (2005-09); see source databases for detail of country coverage.
3. Adjusted series calculated excluding deaths from land transport accidents, accidental falls, suicides and assaults. Age group 0 to 69.
4. Number of years expected to be lived in what might be termed the equivalent of "full health".

Source: OECD (2011), "OECD Health Data: Health Status", *OECD Health Statistics* (database), December and WHO (2011), *Global Health Observatory Data Repository*, World Health Organisation, May.

StatLink http://dx.doi.org/10.1787/888932576453

from cardiovascular and respiratory diseases and cancer cast doubt on a rapid closing of the gap relative to better performing OECD countries. Non-communicable diseases are the leading cause of morbidity and death in Hungary. In particular, ischemic heart diseases, stroke and cancer mortality rates were among the highest in the OECD in 2009 (Table 4.1). By contrast, the incidence of communicable diseases is very low, reflecting the wide coverage of vaccination programmes, along with a system that allows effective and timely intervention in the case of outbreaks. The incidence rates of measles, pertussis and hepatitis B are among the lowest in the OECD.

Inequality in health outcomes is high

The health status of the Hungarian population is not only poor on average, but also widely disparate. Health inequality, as measured by the standard deviation of mortality ages older than ten, was around 15 years, among the highest in the OECD in 2007 (Joumard

Table 4.1. **Mortality rates for infants and by leading causes**
2009 or latest year available[1]

	Infant mortality (deaths per 1 000 live births)	Leading causes of mortality (deaths per 100 000 population)				
		Ischemic heart disease	Cerebrovascular disease (stroke)	Lung cancer	Other types of cancer	Liver diseases and cirrhosis
Hungary	**5.1**	**204**	**87**	**60**	**166**	**37**
Australia	4.3	74	35	29	116	5
Austria	3.8	92	32	29	121	14
Czech Republic	2.9	161	75	37	150	15
Estonia	3.6	192	63	31	146	16
Germany	3.5	93	40	32	125	13
Iceland	1.8	77	35	37	113	2
Ireland	3.2	98	39	38	138	7
Italy	3.7	58	44	33	124	9
Korea	3.5	28	57	32	111	11
Mexico	14.7	85	43	10	81	35
New Zealand	4.7	98	43	31	136	3
Norway	3.1	62	36	32	118	3
Poland	5.6	97	73	47	146	15
Slovak Republic	5.7	255	91	33	153	23
Slovenia	2.4	61	63	35	154	22
Switzerland	4.3	62	27	28	111	. .
United Kingdom	4.6	77	41	38	127	11
OECD[2]						
Average	4.4	85	48	33	126	12
High	14.7 (MEX)	255 (SVK)	91 (SVK)	60 (HUN)	166 (HUN)	37 (HUN)
Low	1.8 (ISL)	26 (JPN)	25 (ISR)	10 (MEX)	81 (MEX)	2 (ISL)

1. The latest year varies from 2007 to 2009 for infant mortality and from 2005 to 2009 for causes of mortality.
2. The average is an unweighted average of latest year of data available; see source database for detail of country coverage.

Source: OECD (2011), "OECD Health Data: Health Status", *OECD Health Statistics* (database), December.

et al., 2010). The gap between the regions with the highest and lowest health-adjusted life expectancies at birth stood at 8.1 years for men and 7.7 years for women in 2008, reflecting large geographical and socio-economic inequalities (HCSO, 2009). Looking at geographical disparities at the level of micro-regions over the period 2000-03, Kaposvari and Vitrai (2008) find that the all-cause mortality rate in the worst performing micro-region[3] (*kistérség*) was over two times higher than the one with the lowest rate. They also find that while around 70% of the variation across micro-regions is attributable to the demographic characteristics and socio-economic status of the inhabitants, the remaining 30% is explained by the level of development and share of the Roma population.

While official national data are not available for the health status of the Roma minority (official data do not mention ethnic groups), there is some evidence that their health status is considerably poorer than the rest of the population. The average life expectancy of the Roma is reported to be ten years shorter than the rest of the population (Council of Europe, 2009). Various independent surveys find that the self-reported health status of the Roma is much worse than the rest of the population, even compared to the lowest income quartile of the general population (Kósa *et al.*, 2007). However, the Roma did not have a significantly higher probability of reporting chronic conditions once socio-economic status is controlled for (Masseria *et al.*, 2010). In addition, infant mortality rates in the Roma population are believed to be rather high, constituting another factor that significantly lowers life expectancy at birth relative to the rest of the population (Ádány, 2008).

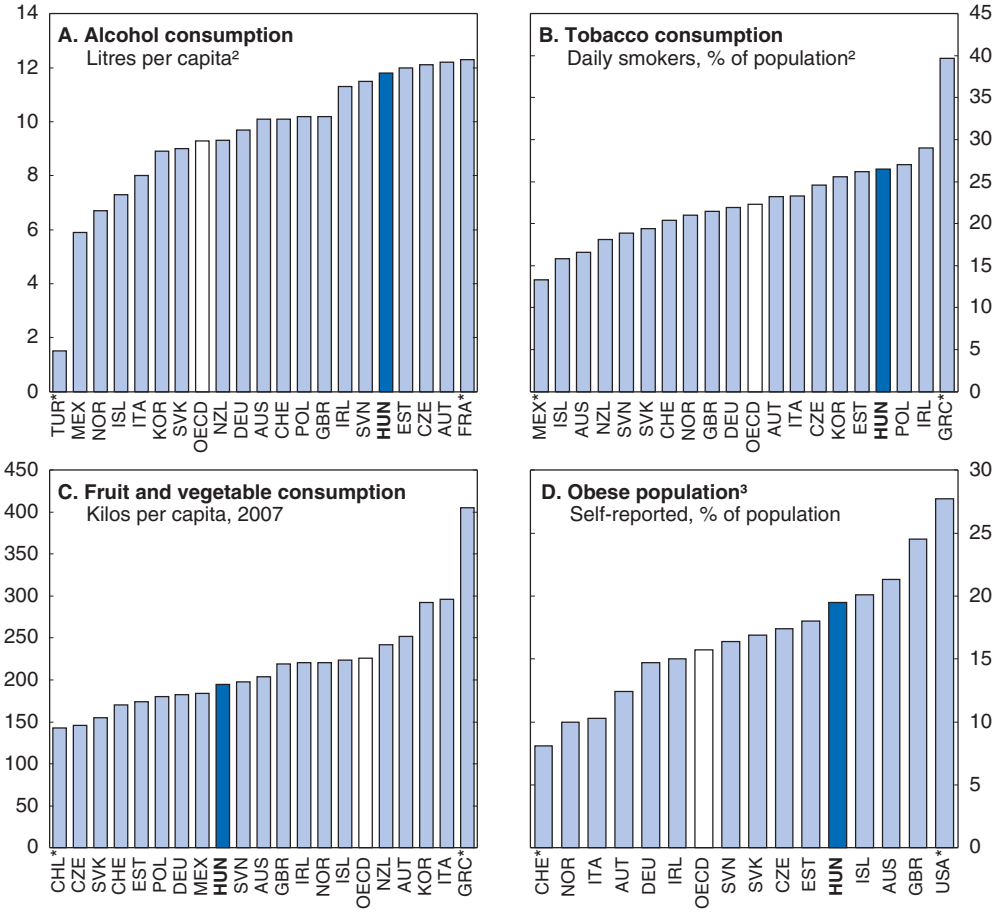
Poor health outcomes are driven by factors beyond the health care provided

Health status depends both on health system interventions and other non-medical determinants, such as lifestyle, environmental factors, and socio-economic status. It is crucial to discuss to what extent poor health outcomes are not directly attributable to medical care.

Lifestyle-related risk factors

Lifestyle-related risk factors, particularly smoking, unhealthy diet and lack of physical activity, are prevalent in Hungary, underscoring the need for comprehensive public health and prevention programmes (Figure 4.2). Hungarians, notably men, make unhealthy life-style choices along several dimensions at once, leading to disproportionately damaging effects on health outcomes. In 2009, Hungary reported one of the highest levels

Figure 4.2. **Health risks**
2009 or latest year available[1]



1. The latest year varies from 2005 to 2010; see source database for detail of country coverage. The OECD aggregate is an unweighted average of data available. An asterisk indicates the lowest or highest value amongst OECD countries.
2. Population aged 15 and over.
3. Luxembourg, Slovak Republic and United Kingdom figures are based on health examination surveys, rather than health interview surveys.

Source: OECD (2011), "OECD Health Data: Non-Medical Determinants of Health", *OECD Health Statistics* (database), December and OECD (2010), *OECD Health at a Glance: Europe 2010*.

StatLink http://dx.doi.org/10.1787/888932576472

of alcohol consumption (at around 12 litres per adult *versus* the OECD average of 9.3 litres), which is directly associated with higher risks of stroke, heart and vascular diseases, liver cirrhosis and certain types of cancer. The types of alcohol traditionally consumed (notably homemade spirits) and the pattern of drinking (with a high share of binge drinkers) are also additional risk factors, making alcohol consumption particularly detrimental to health in Hungary (Szűcs *et al.*, 2005). The European Health Interview Survey conducted in 2009 revealed that 4.6% of the respondents were reportedly heavy drinkers. Such behaviour was more prevalent among male respondents, for whom the proportion of heavy drinkers reached 8.3%, and remained around 1% for women. Tobacco consumption, which is partly behind the world's highest lung cancer mortality rate among Hungarian men, has declined markedly since the mid-1990s, but remains at a high level, exceeding the OECD average. The government has recently taken steps to curtail tobacco and alcohol consumption by increasing excise taxes in November 2011, and introducing a smoking ban in public places, effective from 1 January 2012.

Unhealthy diet, high intake of animal fat, cholesterol, salt, a low intake of vegetables, minerals and dietary fibre, compounded with low physical activity (only about 20% of men and 15% of women aged 15-64 exercise regularly) lead to obesity, high blood pressure and nutritional deficiencies. Around two-thirds of Hungarian men and half of women are overweight or obese (Figure 4.2). High blood pressure affects close to 30% of those aged 25-64 years and type two diabetes affects approximately 10% of the population (HCSO, 2009). There is also evidence that smoking and unhealthy eating habits are particularly prevalent among the Roma minority, with such behaviour being 1.5 to 3 times more common among the Roma than the lowest income quartile of the general population (Kósa *et al.*, 2007). The authorities introduced new legislation, which was adopted by Parliament in July 2011 and took effect in September 2011, taxing a range of pre-packaged foods with high salt and sugar content (mainly targeting chips, chocolates, energy drinks and the like). The authorities argued that the main motivation behind the tax was to promote healthy eating habits and to make those who insist on making unhealthy lifestyle choices contribute more to the health care system, while also stating that the proceeds from this tax will be used to finance the health care system.

Environmental factors

Water, soil, noise and air pollution also contribute to poor health. Air pollution, mainly from vehicle emissions, and the pollution of surface waters from geologically-based arsenic are major concerns in Hungary. Non-organic arsenic is a potent human carcinogen and toxicant, to which people are exposed mainly via drinking water and food. Arsenic levels in drinking water in Eastern Hungary were well above EU limits (Lindberg *et al.*, 2006). In fact, arsenic levels had exceeded EU and World Health Organization (WHO) guidelines by up to 30 times in 40% of drinking water supply. A programme to improve drinking water quality in line with the EU directive has been underway since 2001, targeting around 900 settlements and more than 2.5 million residents of the country (SUMANAS, 2005). By 2010, only three settlements, with a total of 1 300 residents, are exposed to drinking water with arsenic levels highly exceeding the EU limit value. The affected population is supplied with healthy drinking water from alternative sources. The red sludge disaster in 2010, caused by a collapsed industrial toxic waste reservoir, exacerbated such risks. The elevated levels of arsenic and mercury in the red sludge could pose serious health risks for the affected population, especially if the toxic material has entered into the food chain.

Socio-economic factors

Poor social and economic conditions affect health throughout life, with people further down the social ladder running greater risks of serious illness and premature death compared with their counterparts in the highest level. Poverty-stricken regions and socio-economic groups suffer disproportionately from chronic conditions and have considerably shorter life expectancy. Some of the differences across regions are driven by the concentration of disadvantaged population groups in certain regions and individuals from those groups tend to be mostly unemployed and to live in unfavourable conditions, including without running water and sewerage (Kósa, Daragó and Ádány, 2009). Kertesi (2000) relates the poor health status of the Roma to the high share of them working in occupations causing health damage.

The health system has been ineffective at improving the health status

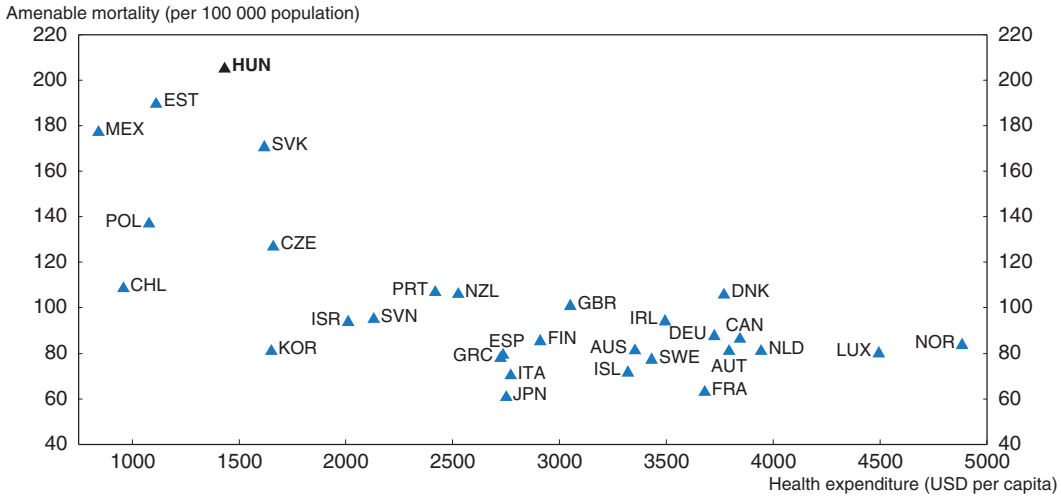
Hungary has managed to produce high volumes of health care outputs, as measured by the number of doctors' consultations and hospital discharges, despite employing a relatively modest amount of resources (see below). In 2009, Hungary spent around 7.5% of its GDP on total health measures, including both public and private spending on medical goods and services, public health and prevention programmes, administration and capital investment in health care infrastructure. In per capita terms, total health spending was close to 50% of the OECD average in 2009, evaluated at purchasing power parities. Over the period 1998-2008, real health expenditure per capita had grown on average by around 4% annually, well below some similar countries, such as the Slovak Republic (8.5%), Estonia (7.5%) and Poland (6%) (OECD, 2011).

However, various estimates obtained using different approaches suggest that Hungary has one of the least efficient health care systems in terms of health outcomes, as measured by various mortality and longevity indicators, in the OECD. Based on panel regressions, Joumard *et al.* (2010) find that the gap between the average health status of Hungarians and the OECD average is largely explained by the limited effectiveness of the system and relatively low level of health care resources. Efficiency estimates derived from Data Envelopment Analysis (DEA) also corroborate the panel data evidence. The conclusion is also fairly robust to the inclusion of different input measures and to alternative definitions of health outcomes. Also, Hungary performs very poorly relative to the countries that broadly share similar health policies and institutions (Joumard *et al.*, 2010). A similar analysis carried out in OECD (2008a) corroborates this finding and reveals that the efficiency of the system has deteriorated substantially in absolute and relative terms between 1990 and 2008.

Amenable mortality, which refers to deaths that could be avoided by timely and effective medical care, could be another indicator used to shed light on the impact of the health care system on the population health status. Amenable mortality takes into account premature deaths for a set of diseases, for which effective health interventions are deemed to exist and might prevent deaths before a certain age limit (usually 75, though sometimes lower). Gay *et al.* (2011) provide amenable mortality estimates for 31 OECD countries by comparing two widely-used lists, prepared by Nolte and McKee (2008) and Tobias and Yeh (2009). Amenable mortality rates in Hungary are among the highest in the OECD and about twice as large as the OECD average for both men and women (Figure 4.3).

Figure 4.3. **Mortality amenable to health care and health expenditure**[1]

2007[2]



1. Amenable mortality based on Tobias and Yeh's list, age standardised rates. See J.G. Gay *et al.* (2011) for details of causes of death covered by the list. Health expenditure is in US dollars at current purchasing power parities. The United States is excluded from this figure as an outlier (health expenditure of 7 437 USD per capita).
2. Or latest year available for amenable mortality (2003-07).

Source: J.G. Gay *et al.* (2011), "Mortality Amenable to Health Care in 31 OECD Countries: Estimates and Methodological Issues", *OECD Health Working Papers*, No. 55 and OECD (2011), *OECD Health Statistics* (database), December.

StatLink http://dx.doi.org/10.1787/888932576491

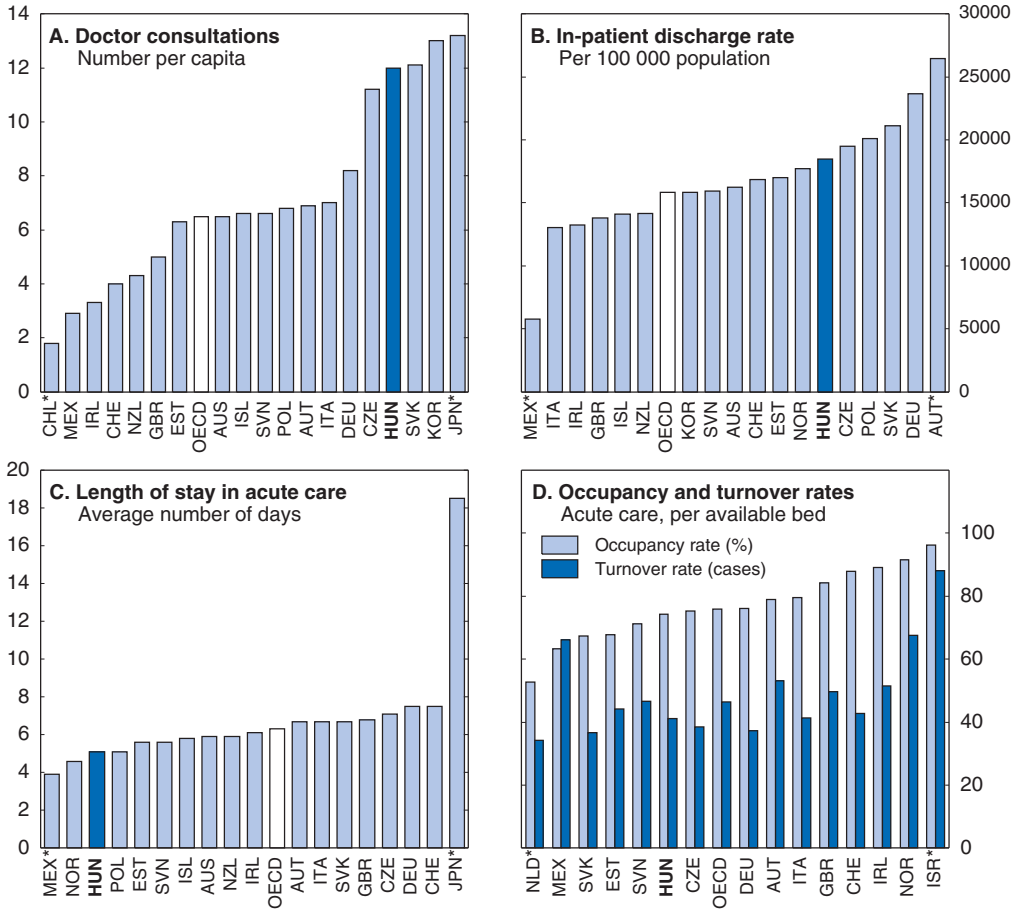
A high utilisation of health care services with limited resources

The universal social insurance model of Hungary has translated into relatively intense utilisation of health care services, despite relatively scarce resources (see Annex 4.A1 for details of the flow of funds in the system). In 2009, the number of consultations with doctors was 12 per person, well above the OECD average of 6.5 (Figure 4.4). While the number of practicing physicians per thousand population in Hungary was around the OECD average at three in 2009, the number of nurses and midwives, was low at close to six per thousand population in 2009, compared with the OECD average of around nine (Figure 4.5). Nurses have an increasingly crucial role in providing health care services both in hospital settings and primary care, notably for chronic care. In addition to nurses, caring personnel, such as nursing aides, play an important role in providing health care. Some countries, such as Denmark, the Netherlands and Norway rely on such personnel to a great extent, while in Hungary their role appears to be limited, as reflected in their comparatively low numbers at 2.5 per thousand population in 2008.

The total number of hospital discharges, similar to the numbers on consultations, was also high, exceeding the OECD average by nearly 20% in 2009. Consistent with the general trend of declining numbers of hospital beds, the number of hospital beds per thousand population in Hungary came down to around seven in 2009 from nearly nine in 1996, owing to cost-containment policies targeting excess capacity in the hospital sector and the advent of new medical technologies allowing greater reliance on day care rather than long hospitalisation. Nevertheless, the number of hospital beds remained above the OECD average of five per thousand in 2009 (OECD, 2011; Figure 4.5). The average lengths of stay in acute and inpatient care were among the lowest in the OECD in 2009. Occupancy and turnover rates in acute care, however, were lower, pointing to excess capacity in inpatient

Figure 4.4. **Health care consultations and hospital resource use**

2009 or latest year available[1]



1. The latest year varies from 2005 to 2009; see source database for detail of country coverage. The OECD aggregate is an unweighted average of data available. An asterisk indicates the lowest or highest value amongst OECD countries.

Source: OECD (2011), "OECD Health Data: Health Care Utilisation", *OECD Health Statistics* (database), December.

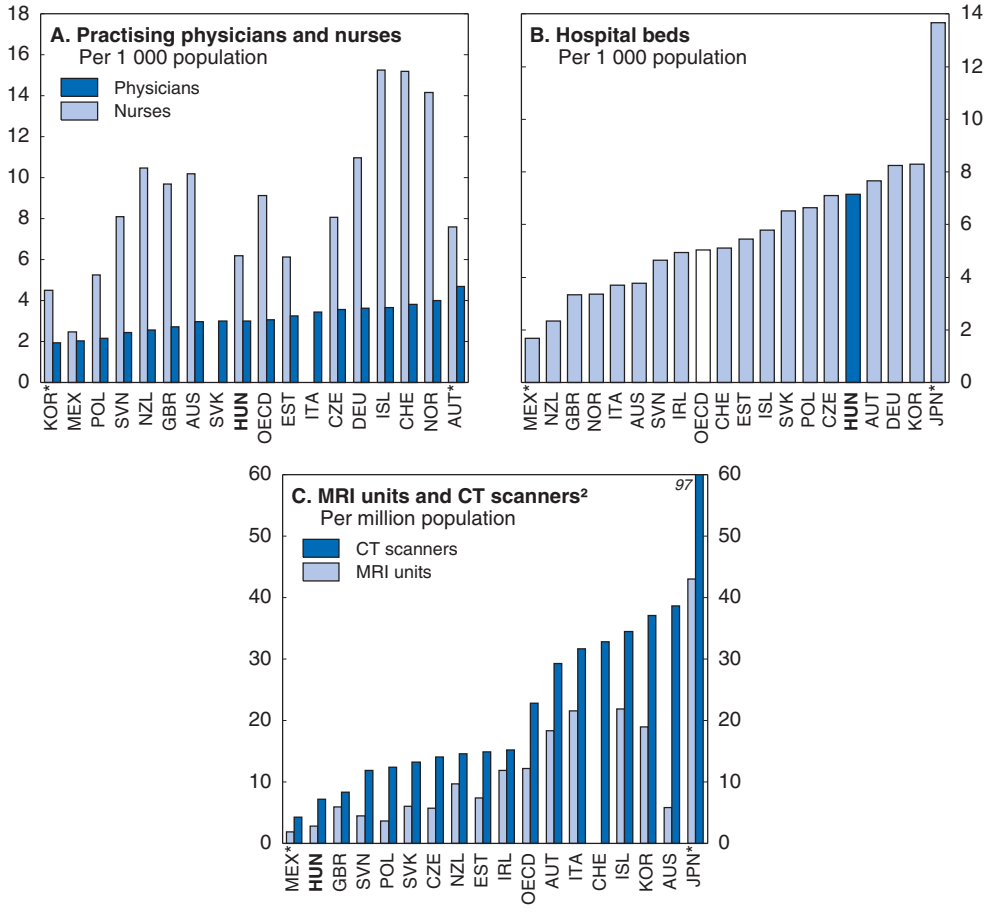
StatLink http://dx.doi.org/10.1787/888932576510

care (Figure 4.4). Hospitals in Hungary tend to be large, with the number of hospitals per million population standing at 17.5 in 2008, compared with the OECD average of 30.1, old (mean age of 50 years in 2004), and to own obsolete equipment, based on a survey conducted in 2004 with the participation of around half of all hospitals in Hungary (Papp and Előry, 2004). They also tend to be spread across multiple sites, with the average of around 20 buildings per hospital. Local governments have owned a great majority of hospital beds (around 80% in 2009) and health care investments have generally been guided by local economic interests, leading to poor co-ordination and wasteful parallel supply of facilities and equipment. The central government has, however, recently taken over county and the Budapest area hospitals, effective from 1 January 2012.

The penetration of high-technology medical equipment is low in Hungary, while the gap in the number of examinations conducted using such equipment with respect to the OECD average is not as wide. The number of magnetic resonance imaging (MRI) units was just below three per million population, less than one fourth of the OECD average and

Figure 4.5. **Health care resources**

2009 or latest year available[1]



1. The latest year varies from 2006 to 2010; see source database for detail of country coverage. An asterisk indicates the lowest or highest value amongst OECD countries. The OECD aggregate is an unweighted average of data available.
2. Magnetic Resonance Imaging (MRI) units and Computed Tomography (CT) scanners.

Source: OECD (2011), "OECD Health Data: Health Care Resources", *OECD Health Statistics* (database), December.

StatLink http://dx.doi.org/10.1787/888932576529

among the lowest across OECD countries in 2009. The number of computed tomography (CT) scanners was also low at around seven per million population, compared to the OECD average in excess of 20 (Figure 4.5).

The allocation of resources is skewed towards some areas

Uneconomic utilisation of hospitals and specialist care seems to prevail in the Hungarian health care system, as indicated by the excess capacity in the hospital sector and the disproportionately high share of specialists in the health workforce. Patients still tend to visit a hospital specialist directly even in cases where cheaper and clinically effective alternatives are available. In 2009, curative and rehabilitative care provided to inpatients and outpatients accounted for around half of current health spending in Hungary, with a slightly higher share of spending on inpatients (Table 4.2). While the share of inpatient care has dropped slightly and that of outpatient care increased since the 1990s, there was no clear systematic approach and trend (Gaál *et al.*, 2011). Changes in medical practice, new technologies and more efficient allocation of resources can all affect the balance between

different types of care delivery, such as inpatient, day, outpatient and home care.[4] In many countries, day care has accounted for an increasing share of total spending on curative care in recent years, while its scope in Hungary remains limited, with spending on day care as a share of total rehabilitative care amounting to 2% in 2008, half of the EU average. The share of day care discharges in all hospital discharges was also low at around 5.5% in 2008, against the EU average of slightly above 20% (European Commission, 2010). Another indication of unnecessary recourse to hospitalisation is the share of cataract surgeries carried out as day cases, which was only 24% in 2009, compared to over 95% in many OECD countries, including Denmark, Estonia, Finland, Netherlands, Norway, Spain and Sweden. Caution is required in making cross-country comparisons of available data due to the incomplete coverage of day surgeries in several countries. The data for Hungary include only interventions carried out in hospitals, as in Ireland and Poland. In addition, preliminary data suggest that the share of cataract surgeries carried out as day cases has increased substantially by 2011. Long-term care (LTC) capacities are also considered insufficient to meet the needs of the ageing population and growing demand in Hungary (Gaál *et al*., 2011). In 2009, the share of LTC in total current health expenditure was less than 5%, while the share in the average OECD country was nearly 15% (Table 4.2).

Table 4.2. **Health care expenditure for selected types of care**

Expenditure per capita in US dollars at current purchasing power parities, 2009 or latest year available[1]

	Total expenditure on health	Inpatient care[2]	Outpatient care[3]	Long-term and home care[2]	Medical goods[4]	Prevention and public health	Administration and insurance	Investment on medical facilities
Mexico	918	. .	358	. .	250	. .	99	. .
Estonia	1 393	381	473	61	359	31	32	56
Poland	1 394	426	390	94	344	30	18	93
Hungary	**1 511**	**371**	**390**	**60**	**556**	**64**	**19**	**34**
Korea	1 879	421	612	178	450	58	65	95
Slovak Republic	2 084	413	639	21	725	96	67	123
Czech Republic	2 108	618	723	73	472	55	70	67
Slovenia	2 579	714	723	211	572	92	104	163
New Zealand	2 983	743	1 002	507	317	200	214	. .
Italy	3 137	. .	989	. .	572	19	16	117
Australia	3 445	1 210	1 251	13	606	69	118	179
United Kingdom	3 487	. .	. .	. .	. .	. .	. .	177
Iceland	3 538	944	1 166	676	632	51	68	. .
Ireland	3 781	. .	. .	. .	. .	. .	. .	172
Germany	4 218	1 126	1 167	574	834	149	222	146
Austria	4 289	1 458	1 114	566	708	72	147	245
Switzerland	5 144	1 457	1 683	995	626	130	253	. .
Norway	5 352	1 435	1 534	1 400	604	113	42	224
OECD[5]								
Average	3 233	904	1 100	456	586	103	115	150
High	7 960 (USA)	1 589 (NLD)	3 623 (USA)	1 400 (NOR)	1 070 (USA)	303 (CAN)	532 (USA)	414 (LUX)
Low	902 (TUR)	371 (HUN)	358 (MEX)	13 (AUS)	250 (MEX)	13 (ISR)	16 (ITA)	34 (HUN)

1. The latest year varies from 2006 to 2009.
2. Inpatient care covers only curative and rehabilitative inpatient care. Long-term nursing inpatient care is included with home health care.
3. Hospital and non-hospital outpatient care, same-day care and ancillary services.
4. Durable and non-durable goods including pharmaceuticals and therapeutic appliances.
5. The average is an unweighted average of the latest year of data available; see source database for detail of country coverage.

Source: OECD (2011), "OECD Health Data: Health Expenditure and Financing", *OECD Health Statistics* (database), December.

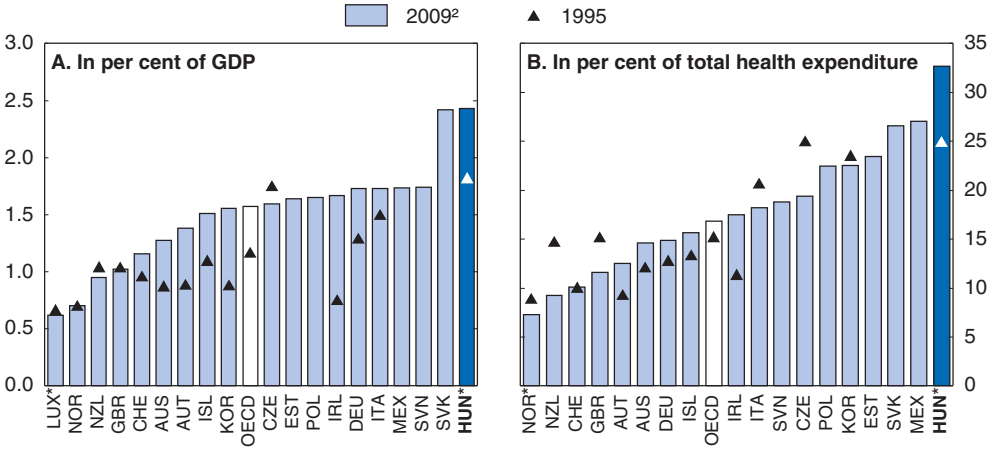
Screening and prevention policies do not appear to be adequately utilised in Hungary. For instance, mortality from cervical cancer is considered to be largely preventable. Regular screening could help identify premalignant lesions, which can be treated even before turning into cancer, or diagnose early stages of cervical cancer, greatly increasing survival rates. In 2009, only around 25% of Hungarian women aged 20-69 were screened for cervical cancer through the organised cervical screening programme, compared with the OECD average of close to 60%. The rate exceeded 75% in Austria, France, Norway, Sweden and the United Kingdom. In 2008, the relative cervical cancer mortality rate in Hungary at almost six per 100 000 women was one of the highest in the OECD. The situation is better in mammography screening (the screening rate at around 50% for women aged 50-69 is only slightly below the OECD average of approximately 55% in 2008), and breast cancer mortality rates have declined significantly since 1998 (OECD, 2011).

Spending on pharmaceuticals appears too high

Spending on pharmaceuticals accounts for a significant proportion of total health spending in Hungary and has grown rapidly. The total pharmaceutical bill in Hungary reached nearly 2.5% of GDP in 2009, among the highest in the OECD (Figure 4.6). In per capita terms, spending on pharmaceuticals was close to EUR 380, evaluated at purchasing power parities, in 2008, slightly above the EU average. The share of pharmaceuticals in 2009 accounted for around 33% of total health spending, with the share of out-of-pocket spending in total pharmaceuticals reaching 40%. Some experts claim that this share may be artificially high due to the inclusion of pharmaceuticals that are normally administered in an institutional setting and should not be included in pharmaceutical spending. Reportedly, once this correction is made, the share could be up to 10 percentage points lower. It is also claimed that low wages in the health sector depress total spending and lead to a higher share of pharmaceutical spending than otherwise would be the case. Public funds cover the remaining 60% of pharmaceutical expenditure, much less than for

Figure 4.6. **Pharmaceutical expenditure**

Total expenditure on pharmaceuticals and other medical non-durables[1]



1. The OECD aggregate is an unweighted average of data available. An asterisk indicates the lowest or highest value amongst OECD countries.
2. Or latest year of data available (2007-09); see source database for detail of country coverage.

Source: OECD (2011), "OECD Health Data: Health Expenditure and Financing", *OECD Health Statistics* (database), December.

StatLink http://dx.doi.org/10.1787/888932576548

physician and hospital services (OECD, 2011). This is due to higher co-payments for pharmaceuticals under the public insurance scheme, which has been used as a measure to shift some of the costs to patients and contain pharmaceutical spending.

The delivery of health care services faces funding and staffing constraints

Funding has not been adequate or stable

A salient feature of the total health spending data in Hungary is its instability. Short episodes of spending increases were generally followed by longer periods of cost containment and budget cuts. Between 1995 and 2009, public expenditure on health decreased by one percentage point to nearly 5% of GDP. Expenditure cuts over the periods 1994-98 and 2005-08 were particularly deep. The share of public health spending in total health spending decreased from close to 85% in 1995 to almost 70% in 2009 (Gaál *et al.*, 2011). Modifications in the financing of health care providers and the introduction of strict output limits resulted in an accumulation of high levels of debt, of around HUF 100 billion in early 2010 (0.3% of GDP), by some inpatient providers, the majority of which are owned by local governments with limited financial resources to bail them out. Due to the financial predicaments of health care institutions, an increasing number of companies have started supplying drugs, medical equipment and appliances, as well as food only against cash or under the condition that they pay back part of their outstanding debt. Further exacerbating the situation, health care institutions have recently faced greater difficulties in borrowing from banks. In order to keep inpatient providers from going bankrupt and the system running, the central government stepped in with extra funding in 2009 and 2010, under the condition that participating institutions agreed to make a consolidation plan, participate in a regular debt-monitoring system and co-operate in territorial capacity restructuring. The government also provided some extra funding (HUF 58 billion, around 0.2% of GDP) at the end of 2011 to help heavily indebted health care institutions.

The inadequacy of public funding in health care partly reflects problems in revenue collection commensurate with the scope and breadth of the health basket. The social health insurance scheme provides almost universal coverage and a rather comprehensive health basket with little or no co-payments, excluding some medical services, pharmaceuticals, medical aids and prostheses. A systematic approach to review the benefit package and exclude services and goods that are not cost effective or their clinical effectiveness is still missing. The funding of the health system has been strongly influenced by policy goals not directly related to health, such as the determination of social security contributions based on labour market and broader economic policy objectives (Gaál *et al.*, 2011).

A looming crisis in the health care workforce is a pressing issue

Hungary faces a serious challenge to retain its medical doctors and this problem has come to the fore lately, becoming ostensibly the most pressing issue affecting the health care system. In May 2011, the Hungarian Hospital Residents' Association (HHRA) gave the government until the end of 2011 to take steps towards improving their wages and threatened to resign in mass in January 2012 unless their wages were increased to three, from the current levels of around 1.5, times the average wage. As a result of the negotiations between the authorities and the HHRA, the deadline was moved to the end of March 2012, until when further discussions are planned to take place. A survey conducted by the Hungarian Doctors Association (MOSZ) concluded that more than 6 000, mostly young, physicians may leave the country next year if a career model is not established by the end of 2011. According to the Hungarian Chamber of

Health Professionals, there is currently a shortage of 4 000 health care professionals and about 1 500 professionals are leaving every year, which could undermine the continuous delivery of health care services within five years.

Since there has not been an official registry of health care professionals leaving the country to practice elsewhere and registering with relevant chambers was not compulsory for health workers until April 2011, the number of health care workers applying to have their diploma certified is commonly used to estimate their outflow. Health professionals need to go through a lengthy process and pay substantial fees to have their diploma certified by the Office of Health Administration and Administrative Procedures (OHAAP). Between May 2004, the date of the entry into the EU, and the end of December 2009, 4 901 physicians (their numbers stood around 30 000 in 2009), 1 306 nurses (there were around 62 000 in 2009), 749 dentists and 226 pharmacists applied for certification. Although some of these health professionals were already working in another country, hence overestimating the extent of outflows over the period in question, these figures are indicative of a significant pressure. On the other hand, the inflow of health professionals has been weak, with the exception of nurses; 639 foreign physicians, 1 585 nurses and 82 dentists were registered with the OHAAP between 2004 and 2008. Due in large part to linguistic barriers, these health professionals tend to be from Hungarian minorities in neighbouring countries. It appears to be the case that there was a net positive inflow of nurses, and the number of foreign nurses applying to practice in Hungary has dropped sharply by around 45% since the mid-2000s (Eke *et al.*, 2011).

Reforms of the health care system

While the outputs of the health care system are significant, they have not been translated into health outcomes to the extent consistent with the level of health care services delivered. This apparent disconnect between health outputs and outcomes is likely to indicate problems in various areas. The authorities need to address related weaknesses to improve the quality of health care services without putting excess strain on public resources.

Enhancing spending efficiency, keeping output inflation and costs under control

Containing spending on pharmaceuticals

The Hungarian authorities have by and large relied on blunt policy instruments, such as introducing caps to relevant budgets, to contain spending on pharmaceuticals. However, greater efforts should be placed on channelling public resources into subsidising only pharmaceuticals which are necessary, effective, and obtained at the best possible price, and on ensuring pharmaceuticals are used appropriately. In 2006, generics captured around 30% of the market in value terms and 40% in volume terms, down from 55% in volume and 35% in value terms in 2004 (EGMA, 2007). In several OECD countries, the value of the generics market is small relative to the share of the total pharmaceuticals market in volume terms, reflecting the extent of price differences between original products and generics, and in turn the degree of price competition for products off patent protection. In Hungary, the gap is much smaller, indicating a lack of price competition in the generics market (OECD, 2008b). There have been a number of important measures announced in the Széll Kálmán plan to contain pharmaceutical spending, most notably through measures aiming at stimulating price competition, favouring generics, improving patient compliance and reviewing drug subsidies. In particular, the authorities adopted measures in July 2011 to foster the extent of competition in the pharmaceutical market. The move towards international reference

pricing and the generic program are rather positive steps. The halving of the time period required for a generic product to become a reference product to three months after the expiration of the patent is also likely to boost competition.

Incentives faced by physicians, patients and pharmacies should be aligned to favour lower-cost generic alternatives. Mandating the substitution of prescribed drugs by the lowest-priced bioequivalent and substitutable products and allowing monthly price changes has been largely successful in Sweden (Moïse and Docteur, 2007). Another policy to encourage the use of generics is to require physicians to prescribe the international non-proprietary name for an active substance, rather than the brand name. In the United Kingdom, almost 80% of all prescribed medicines in 2004 were prescribed in this manner. Successfully influencing prescription behaviour in this direction, however, entails changes in medical school teaching practices and providing further support to physicians to inform them about generic alternative products, for instance, through the use of computer software (Simoens and de Coster, 2006). A pilot active-substance-based prescription scheme for cholesterol reducing medications (statins) has been decided on and will be launched in April 2012 in Hungary. Clinical guidelines, developed to guide physician decision making, could also be used to promote best practices in drug prescription and use. In order to scrutinise and monitor drug prescribing and dispensing, centralised electronic records should be maintained. This would also help implement practice profiling and benchmarking to assess the performance of providers in terms of guidelines and prescription behaviour. Furthermore, when using health technology assessments, it should be established that these guidelines are evidence based.

As part of the fiscal consolidation package, the government increased the licence fees of pharmaceutical industry sales representatives. While this could reduce the number of sale representatives (althrough pharmaceutical firms can pass some of this additional cost on to consumers), it is not likely to address the perceived problem of undue influence of pharmaceutical companies on physicians. In Sweden and Switzerland, pharmaceutical companies and health professionals adopted a code of good conduct, imposing guidelines and restrictions on education and promotional activities of pharmaceutical industry sale representatives. In Sweden, some county councils placed restrictions preventing any kind of direct contact between physicians and the pharmaceutical industry (Moïse and Docteur, 2007). Rather than taking such an extreme measure, restrictions such as allowing only group visits would preserve the educational value of the visits of sales representatives and could reduce the likelihood of undue influence of the pharmaceutical industry through this channel.

Addressing deficiencies in organisation and prioritisation process

The objective of health policy and the prioritisation process should be dictated by allocating greater resources to where the maximum benefits could be obtained, rather than health care outputs. This approach could also underpin the prioritisation process.

Better alignment of the capacity of providers to the needs of patients has been a stated goal of successive governments since 2002. It was seen as an important step to make health care provision more equitable, increase the quality of care and improve the efficiency of health care delivery. In 2006, the government explicitly recognised that the structure of the health care delivery system (the ratio of acute, chronic, and nursing care capacities) in relation to morbidity and mortality patterns was distorted. Furthermore, it was argued that the geographical distribution of the capacities was unequal, resulting in unfair disparities in access to care (Gaál *et al.*, 2011). The Hungarian health care system was

transformed into the current purchaser-provider model from an integrated state health services provider, with a view to splitting the purchasing and service delivery functions and leaving the government only with regulatory responsibilities. It was envisaged that the local governments would plan for health care services needs, helping to get rid of legacy of excess capacity. This strategy failed, as local governments were not willing to close down hospitals because of associated political costs and the lack of administrative capacity. The government took over the assets and debts of 13 hospitals and health care providers in the municipality of Budapest and an additional 32 hospitals and health care providers across the country as of 1 January 2012. While there is no concrete plan on how these new institutions will be managed, some changes are likely to take place, starting in May 2012, to facilitate the reallocation of resources, notably between inpatient and outpatient care, as well as between curative and preventive and long-term care.

Health needs assessments are not systematically conducted to guide the contracting process in Hungary. Instead, the government and Parliament have the most decisive role in regulating provider contracts, including capacities, reimbursement prices, volume of outputs, provider payment schemes, and the financing of capital costs. Systematic health planning and needs assessments do not figure in the purchasing decision of the National Health Insurance Fund Administration (NHIFA). In addition, systematic performance measurements are also lacking, with accountability measures being restricted to audits that chiefly focus on legal and financial aspects of the operations of providers (Gaál *et al.*, 2011). The authorities should allow the NHIFA to engage in selective contracting to avoid oversupply while building commensurate capacities in the NHIFA to enable it to perform the new tasks.

Improving the co-ordination of care across providers

As a result of a sharp rise in the prevalence of chronic diseases and degenerative conditions, particularly in ageing populations, care co-ordination has become increasingly important and relevant in OECD countries, reflecting the need to shift the focus of health care services from acute interventions to monitoring and managing chronic conditions (OECD, 2010). Optimal management of such conditions requires the involvement of multiple care providers and specialties at different levels of care. Care co-ordination can also cover acute care episodes. In a fragmented system of health care providers, which are institutionally independent and operate under different budgetary regimes, it is a challenge to co-ordinate care across different providers and modes of care in ways that can improve quality of services and reduce costs. This, in return, entails changes in the payment systems and the organisation of providers to encourage them to work in teams, share information and assume collective responsibility in a patient's health. Hofmarcher *et al.* (2007) suggest that there is scope for improving performance in co-ordination by changing existing health-care systems through a policy mix ranging from better organised ambulatory care to patient-centred integration of health and long-term care. Hungary has some experience with care co-ordination. The care co-ordination pilot project covered around 20% of the population and was in place between 1999 and 2008. Although it was not maintained long enough to fully assess its performance, it was considered to be successful (Gaál *et al.*, 2011). The care co-ordination experience also revealed that it can have a cost-increasing effect if previously unmet needs are uncovered, as in the absence of proper care some patients prematurely die or the critical window of opportunity to treat passes. This could in fact be desirable, particularly if addressing unmet needs led to dramatic improvements in health

outcomes. Although implementing care co-ordination within the current system is likely to require sustained efforts to embed the right incentives and develop an appropriate organisational and operational structure, the authorities should move in this direction.

Improving provider payment schemes

While Hungary has made strides in overhauling provider payment systems to improve the performance of the health care system, further reforms could help the health system addressing the challenge of substantially improving the health status of the population without putting undue strain on resources. The challenge for the reform of the health care payment systems is to give health care providers an incentive to offer the right care for each patient at the right level and in the right institutional setting. This also entails giving difficult cases sufficient resources and conserving resources in cases where their use would be sub-optimal. Furthermore, changes in payment systems could have long-term consequences for technology use, medical practices and costs over time (McClellan, 2011).

Family doctors (GPs) and paediatricians in Hungary are intended to act as gate-keepers, as patients need referrals to have access to higher levels of care, with the exception of some specialties. They have, however, not been effective in avoiding unnecessary referrals and offering definitive care. Between 1990 and 2008, the number of non-diagnostic referrals to outpatient specialist care increased by more than four times, while the number of patients referred to inpatient care per physician increased by almost 80% (Gaál *et al.*, 2011). This in part reflects the lack of incentives embedded in the capitation payment system, which currently prevails in the Hungarian primary care system.

Capitation-based systems stipulate fixed payments per patient regardless of the cost, intensity and quality of services provided in primary care. In Hungary, capitation payments take also into account the age structure of individuals on the list of the family doctor or paediatrician to control for the needs of patients. In a competitive environment, which is largely in place in Hungary with few restrictions on patient choice, GPs who are paid fixed capitation payments would compete on the quality and conformity of services with patient demands. At the other end of the spectrum, fee-for-service payment systems, which relate the volume and intensity of care to remuneration of providers, do not penalise the use of higher quality and intensity services. There is a trend towards introducing greater accountability for quality and efficiency in provider payment systems, which generally requires a combination of fee-for-service, pay-for-performance and capitated payments. The optimal combination of these systems, however, needs be decided by the authorities on practical grounds.

The fragmented nature of the provider payment system in Hungary does not provide health care providers with incentives to deliver equivalent treatments in a less costly setting and the mode of care. There are welcome steps taken to align outpatient and homogenous disease group (HDG) points so that therapeutically equivalent treatments are rewarded equally regardless of the setting in which health services are offered. For instance, aiming at increasing the proportion of one-day surgeries, 126 new surgical procedures have been added to those that may be performed as day surgeries in 2011.

Reducing personnel costs by reallocating duties

The skill mix of Hungarian health workers appears to be different from that in other OECD countries. The ratio of practicing nurses and midwives to physicians was low at around two in 2009, relative to the OECD average of three and well below some OECD

countries, most notably Ireland (close to 6.5) and Finland (above 5.5) (OECD, 2011). The high share of highly paid specialists and low nurse-to-physician ratios create cost pressures, which could be aggravated if substantial increases in the wages of health care workers take place to retain them in the system. Although skill-mix arrangements likely depend on productivity considerations, health worker and patient preferences, and other economic and social factors, there is some evidence suggesting that certain tasks traditionally performed by physicians could be transferred to highly qualified nurses, without undermining the quality of care. Indeed, Hungarian physicians tend to perform medical and administrative tasks that could be carried out by nurses and other support personnel (Gál *et al.*, 2003; Orosz and Holló, 2001). Increasing the share and training of lower-skilled health care workers to take over mundane tasks performed by doctors would have the potential to reduce personnel costs, improve labour productivity and relieve shortages in some specialties (OECD, 2004).

Improving health outcomes and macroeconomic performance

Enhancing the quality of health care services

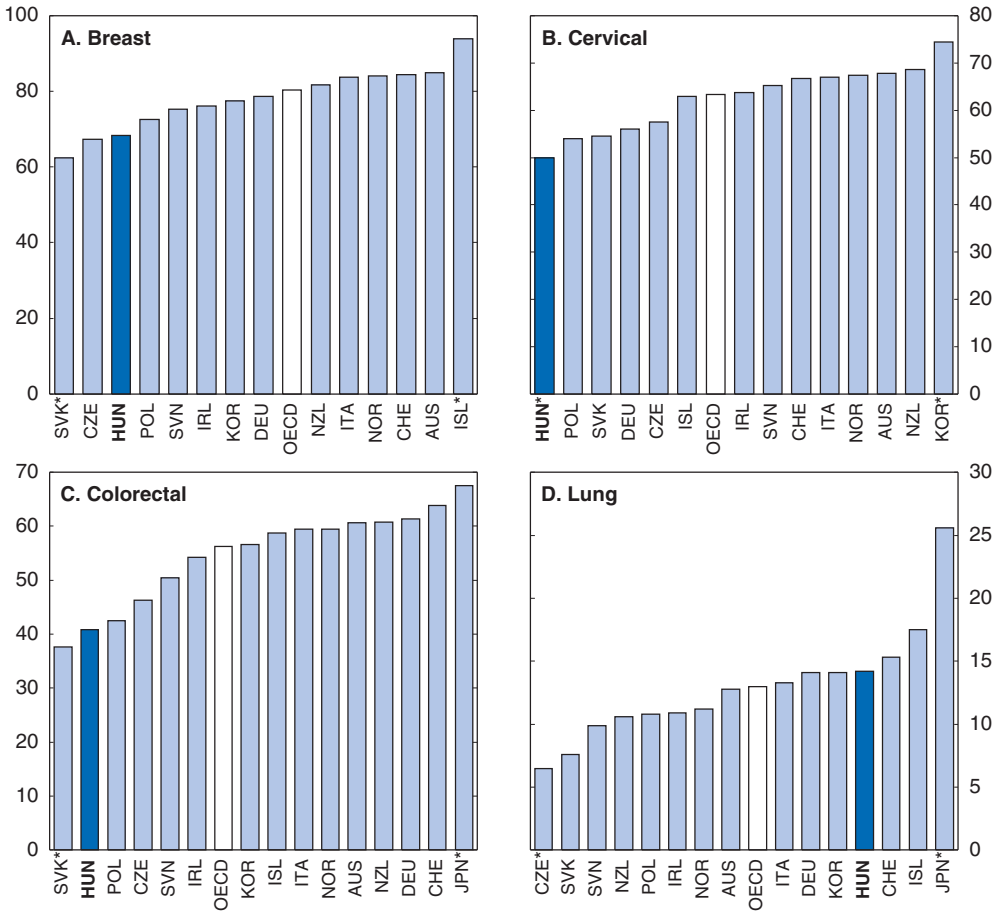
The extent of available health care quality indicators for Hungary is limited. Making provider payment reforms operational entailed building information technology capacities, which in turn has improved the transparency and accountability of the health care system. In theory, quality indicators could be constructed from performance data reported to the NHIFA and used to evaluate the performance of the system and providers. The authorities should act swiftly to construct quality indicators at the provider level, which would require little additional investment. Provider-level quality indicators could also be used in the purchasing decisions of the NHIFA, which is the sole payer with a monopsonistic market power but has only very limited power in exercising discretion over purchasing decisions, notably setting contract conditions and engaging in selective contracting with providers.[5] For instance, stipulating minimum quality requirements in the contracts of the NHIFA with providers would be rather supportive of improving the quality dimension of the health care services.

There is some evidence indicating that the quality, timeliness and appropriateness of health care services is lacking. Cancer survival, which is not heavily influenced by factors outside of the health system, is an area where cross-country comparisons can be conducted to gauge the ability of health systems to offer accessible, quality care. While socio-economic and other factors can affect how early a cancer is identified for treatment, and hence influence survival, the ability of health systems to provide access to quality care is a crucial determinant of performance. Hungary performs very poorly in terms of survival rates, with the exception of lung cancer (Figure 4.7). In addition, the gaps in survival rates are rather large relative to better performing countries, such as the United States, Japan and Western European countries, despite the fact that Hungary devotes a relatively high share of resources to cancer care. Spending on cancer care amounted to 7% of total health expenditure in 2006,[6] among the highest in the OECD, and the number of oncologists per thousand population was around 55 in 2009, lower only than in Sweden and substantially higher than the OECD average (OECD, 2011).

There are several avenues that the authorities could explore to improve the quality of health care services. More specifically, strengthening primary care, reforms of the provider payment systems and greater care co-ordination are promising areas to substantially

Figure 4.7. **Relative survival rates for cancer**

2007-09 or nearest available year, per cent[1]



1. The OECD aggregate is an unweighted average based on available data for 28 countries. An asterisk indicates the lowest or highest value amongst OECD countries.

Source: *Eurocare 4 Database*, Instituto Superiore di Sanità, *www.eurocare.it*.

StatLink http://dx.doi.org/10.1787/888932576567

enhance the efficiency of the Hungarian health care system in terms of health outcomes, and even cost effectiveness.

Strengthen primary care. Primary care has an important role in the delivery of health services in the majority of health systems. Primary care represents the first and most typical point of contact for basic health and other care needs. It often serves as the co-ordinating hub for prevention, specialised care and the management of long-term chronic conditions. In turn, greater reliance on primary care has the potential to reduce the need for costly and unnecessary hospital care, while significantly reducing the number of premature deaths, especially those arising from chronic conditions (OECD, 2011b). Despite the potential for large improvements in population health and health system efficiency through better primary care provision, Hungary, as most other OECD countries, spends little on primary care. The number of GPs relative to specialists is also among the lowest in the OECD (OECD, 2011).

The quality of primary care services in Hungary appears to be relatively low. Potentially preventable admissions are often used as a measure of the quality of primary care services, as these conditions can be easily identified, treated or managed in a primary care setting. In the absence of such indicators, potential years of life lost for medical conditions amenable to prevention and management in a primary care setting are used as an alternative indirect measure for the performance of primary care. Similarly, the same type of analysis is carried out for cancers that are considered to be amenable to early detection in a primary care setting. On these measures, Hungary is one of the countries in which significant gains could be achieved in avoiding mortality from chronic conditions and reducing the number of years of life lost for cancers that can be detected early (Abi-Aad, 2012).

Increasing the amount of resources dedicated to primary care provision should be accompanied by improvements in the volume, quality and range of services offered by GPs and could be financed by savings realised in other levels of care through greater reliance on primary care. An important step in strengthening primary care is attracting a greater number of physicians. A quota system was introduced in 2000, giving "practice rights" (*praxisjog*) to each family doctor with a territorial supply obligation in that year. While this was originally intended to provide adequate pension income to family doctors, it has become a major obstacle to the entry of young family doctors into the system. The recent establishment of a practice fund and announcement of the grant programme for career-starting GPs by the authorities to facilitate the purchase of practice rights are welcome steps in the short term. The authorities, however, need to abolish practice rights in the long run to ensure that sufficient numbers of family doctors enter into the system without sustained financial support and incentives.

One possible way of improving quality and efficiency at the primary care level is to raise the share of group practices, in which self-employed medical and paramedical health professionals are united in a single practice, rather than the solo practices which currently dominate in the provision of primary health care services in Hungary (PHAMEU, 2010). Compared with traditional solo practices, group practices present several advantages: greater accessibility due to longer opening hours; efficient co-operation between medical professionals; more extensive care supply; reduced overhead costs; more scope for delegating tasks traditionally carried out by physicians to nurses and other professionals; and a better work-life balance between private and professional life, perhaps helping to attract younger general practitioners (WHO, 2008). While the current capitation-based payment system is not perceived as a barrier for developing co-ordination and co-operation in group practices, as opposed to pure fee-for-service systems, extra payments for professional co-operation could be introduced to encourage group practices. If group practices offer new services, such as counselling chronic patients, special payments for these new services should be considered.

In an attempt to improve its control over the quality of primary care, the government introduced in 2009 a performance bonus system for family doctors within GP contracts, based on a number of quality indicators. The set of indicators was expanded in 2011. It is similar to the Quality and Outcome Framework (QoF) adopted in the United Kingdom in 2004. Although the scale and scope of the programme was modest, as measured by the range of indicators considered and the total amount spent (HUF 300 million in 2010), there are plans to scale up the programme and improve the eligibility criteria (Gaál *et al.*, 2011).

The use of information technologies in primary care needs to be improved in Hungary. The communication of electronic patient records across all levels of care is currently limited. Family doctors manually transmit care documents via the patient to secondary care specialists (Gaál *et al.*, 2011). Extending the information technology capacities to introduce electronic patient records that are readily available across different care settings would allow providers to access patient information readily, which in turn would streamline treatment decisions, reduce duplication, and improve accountability of providers. They would also make billing more transparent and allow patients to access and monitor their care. For a widespread adoption of electronic patient records, the authorities need to establish clear incentives and benefits to GPs and their patients to successfully gather data at the practice level (OECD, 2009).

Replace budget caps. Another element of the compensation of providers that could have undesirable effects is spending constraints in the form of budget caps, notably in outpatient and inpatient care in Hungary. In 2004, the government started setting output limits in inpatient and outpatient care in terms of the maximum number of diagnosis related groups (DRG) and outpatient fee-for-service points for each provider. Since 2007, providers have not been compensated for points generated above these caps, leading some small hospitals to refer their over-the-limit patients to larger hospitals. Such caps encourage providers to spend up to the ceiling and provide little incentive for them to make efficiency gains or increase productivity. In addition, if cost-containment initiatives are maintained for a long period, they can have undesirable effects. For instance, capped budgets create incentives to adopt cost-saving technologies, but also create disincentives to take up technologies that may reduce costs on a per-unit base but drive up overall costs because of resulting growth in volume. Therefore, budget caps in various health sub-budgets are blunt instruments and should be replaced with instruments that promote quality and activity (OECD, 2004).

Unify the funding of capital and recurrent costs. Health care providers in Hungary are funded by social health insurance for recurrent costs, out of general revenues for capital costs. NHIFA contracts do not cover capital costs. Investment decisions are effectively separated from the utilisation of health care services, with repercussions for service delivery and quality. For instance, there is evidence of the use of ineffective or dominated technologies, inappropriate care, and provision of unnecessary services (Gaál *et al.*, 2011). Health care services are to a great extent provided by institutions owned by local governments. In the absence of adequate returns on private capital, including depreciation costs, private sector involvement in the health care sector has remained limited. This has placed a substantial burden on local governments with maintenance obligation as the owners of providers and limited resources. One potential way to rectify this problem is to incorporate the price of capital into health care provider payment systems. Sussex (2004) argues that compensating providers for both recurrent and capital costs jointly has a number of potential benefits, particularly for publicly owned health care providers, such as: *i)* making providers realise that capital is a costly input; *ii)* inducing providers to ensure an appropriate mix of capital and labour; *iii)* improving the comparability of costs across different health care providers and consequently enhancing benchmarking and performance management, which could be used to set a reliable basis for fair competition between public and private sector providers (Kutzin *et al.*, 2010).

Improving the management of the health workforce

In a sector, which by and large remains labour-intensive, developing strategies to address current and future challenges of training and maintaining an appropriate distribution of staff across specialties and geographic areas is a perennial challenge. In addition, devising appropriate compensation and performance assessment schemes to improve the quality of health care services is of great importance.

Devise appropriate compensation schemes and other incentives. As noted above, the emigration of health workers poses an immediate challenge. Salary levels have been the main push factor for the emigration of health care professionals (Eke *et al.*, 2011). Health care workers have predominantly been salaried public employees in Hungary, with the most notable exception of entrepreneur family doctors who contract with the NHIFA and local governments. Most specialists are salaried public employees, who are guaranteed a minimum level of salary according to a pay scale that takes into account qualifications and years of experience, but increasingly high numbers of them contract with providers and work as private entrepreneurs. The salaries of health care workers on average have stood at a relatively low level, significantly below the economy-wide average (close to 90% in 2010) (HCSO, 2011). The substantial increase in autumn 2002, before local elections, boosted the average wages in the health sector closer to the industry average, but the following waves of strict cost-containment policies have led to health sector wages losing ground to the rest of the economy. Although there have been some targeted measures (most notably, the recent resident grant programmes and income supplements to health care workers in high-risk positions), the pattern of relatively low wages continues to hold for health care workers with different skill levels and their counterparts in the rest of the economy (Table 4.3). Similarly, the gap between the wages of nurses and economy-wide average earning was around 20%, even after taking into account overtime payments (Gaál *et al.*, 2011). The wages of health care professionals are low by international comparison. In 2009, as multiples of the average wage, the wages of GPs (1.4), specialists (1.6) and hospital nurses (0.8) were among the lowest in the OECD.

Table 4.3. **Average monthly earnings of employees by sector of activity**

Per cent of national economy total

	2000	2005	2010
Health activities	81.9	96.5	85.2
Industry	103.5	95.4	103.2
Financial and insurance activities	216.4	221.3	213.4
Public administration and defence[1]	120.3	134.1	125.0
National economy, total (thousand HUF)	91.8	166.7	216.0

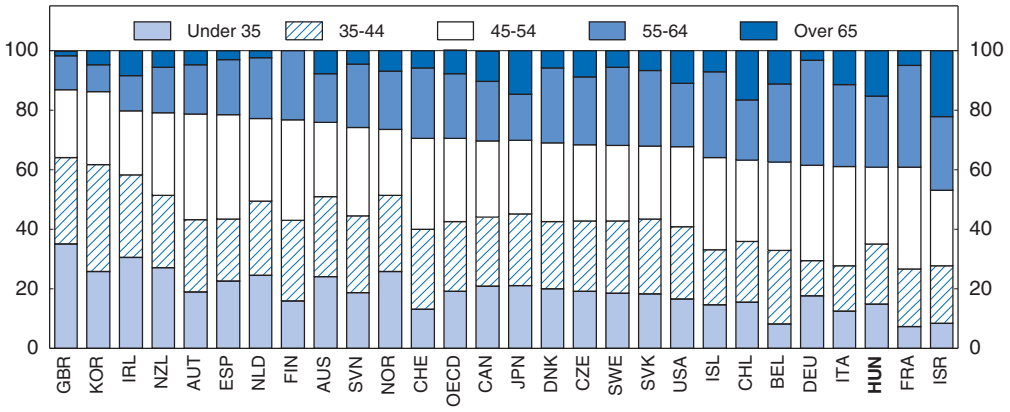
1. Including compulsory social security.

Source: HCSO (2011), "Employment, Unemployment and Earnings", *Stadat Tables*, Hungarian Central Statistical Office, December.

Compounded by the emigration of health professionals, the relatively unfavourable age structure of practicing physicians exerts an additional pressure on the Hungarian health system. The share of physicians aged over 55 was around 40% in 2009, well above the OECD average of around 30% (Figure 4.8). The high share of older physicians reflects many physicians who supplement their pension incomes by continuing to draw salary, as indicated

Figure 4.8. **Age distribution of physicians**

2009, per cent[1]



1. 2008 for Australia, Denmark, Ireland, Japan, Netherlands and Sweden. The OECD aggregate is an unweighted average of data for 27 OECD countries.

Source: OECD (2011), "OECD Health Data: Health Care Resources", *OECD Health Statistics* (database), December.

StatLink http://dx.doi.org/10.1787/888932576586

by the high share of physicians aged over 65 at around 15%, compared with the OECD average of nearly 10%. The demographic problem is more pronounced among family doctors and paediatricians, around 27% of whom were over the age of 60 in 2007, up from 10% in 1990 (Ádány, 2008). In order to better understand whether there is a sufficiently large pool of licensed physicians to draw from in the face of a high pace of retirements and immigration, the difference between licensed and practising physicians could be used (European Commission, 2010). The difference was close to 30 per 100 000 population, one of the lowest in the OECD, indicating that while Hungary currently does not appear to have a problem in terms of the overall number of practicing physicians, with a significant share of physicians approaching retirement fast, corrective measures are needed to maintain sufficient numbers of medical staff. One way to replace retiring and emigrating health care staff is to increase the training of new physicians. The number of medical graduates per thousand practicing physicians stood at 30.9 (9.6 per 10 000 population) in 2008, down from 41 in 2005 and around the OECD average of 31.3. Nursing graduates per 10 000 population were 39.1 in 2008, *versus* the OECD average of 38.9 (OECD, 2011).

The management and strategic planning of the health workforce is crucial, considering the length of medical education and difficulties to adjust the supply of skilled health workers rapidly. An important consideration in the planning and management of the health workforce is that co-ordination across different areas must be ensured. For instance, as illustrated in the case of Hungary and some other OECD countries, not being able to set correct remuneration levels and keeping remuneration from rising in order to contain overall health costs have led to difficulties in maintaining an adequate level of services (Docteur and Oxley, 2003). Increasing international mobility of health workers has made the task even more challenging, compared to the case where the government was able to determine both the supply of and demand for health workers. There are additional challenges, such as addressing disparities in physician densities across regions and specialties. Financial incentives alone are not likely to improve concerns in these areas. Policies focusing on a mix of both financial and other incentives, such as improving working-time flexibility, creating more flexible career development opportunities and offering a wider range of options for

continued education and training should be considered (OECD, 2008c). Early career advice and support during medical school and after graduation was found to encourage young doctors to take up shortage specialties in the United Kingdom (Mahoney *et al.*, 2004). According to a review of practices in OECD countries, giving students experience of primary care practice and appointing primary-care role models to academic positions influence students' choices towards a career in primary care (Simoens and Hurst, 2006).

Addressing inequalities in health status and access to health care

There are wide disparities in access to health care across different regions in Hungary, driven not only by differences in the level of socio-economic development, but also the availability of health care capacities. In 2007, there was a twelve-fold difference in the per capita utilisation of day care, and three-fold difference in acute inpatient care across micro-regions. Sizable gaps remain even after controlling for differences in health care needs (HealthMonitor, 2010).

Strongly discourage the use of informal payments. Informal payments are a legacy issue that is deeply rooted in the Hungarian health care system. Relatively low salaries of medical doctors are considered to be the main contributing factor to the prevalence of informal payments, as informal payments are considered an important source of out-of-pocket expenditure. Informal payments do not only influence the efficiency of the health care system, raising the possibility to undermine policy objectives, but also are a highly regressive way of funding health care. Szende and Culyer (2006) find that people with lower income pay proportionally more for public health care through informal payments in Hungary. Gaál (2004) also reports that refusal to pay informal payments results in denial of home visits by GPs and elective surgeries.

There is no simple solution for the elimination of informal payments and it is likely to take a concerted effort to change the behaviour of both physicians and patients. A limited number of countries have been able to successfully reduce informal payments and some common elements from their experience could guide Hungary. For instance, taking a comprehensive approach to address the deficiencies of the health care system as a whole and reinvesting ensuing efficiency dividends back into the system by most notably improving the remuneration of health care workers would be a key enabling factor to combat informal payments. Another important aspect is the acceptance of patients to pay for services that are freely available, reflecting the importance of the cultural context. For this reason, defining a clear and transparent basket of health care services and educating patients is crucial. Nevertheless, Gaál and McKee (2005) argue that distrust in the system could motivate health care professionals to ask for a "fair" remuneration and patients in return could accept it. The short-lived experience of introducing user fees in Hungary was partially an attempt to formalise informal payments. There is no firm evidence that user fees had an appreciable impact on reducing informal payments (Kutzin *et al.*, 2010). While it is less likely to produce results when introduced alone, condemning informal payments as a corrupt practice publicly and seeking sanctions through the legal system or professional organisations could become a supporting pillar.

Ensure access to health care services, in particular for the Roma minority. The Roma are significantly more likely to report worse health in any indicator than the non-Roma in Hungary. Part of the discrepancies in outcomes may be traced back to the relatively poor

access of the Roma to health care services. Based on a survey on the health status of people in Roma settlements, Kósa *et al.* (2007) find that the Roma are less likely to utilise health care services, particularly specialist and dental services. There was a big gap between the share of Roma women and women in the rest of the population aged 45 to 64 who underwent a mammography: only 25% of Roma women *versus* 70% of other women indicated that they had participated in the universal breast screening programme. They also find that the use of health services by the Roma is similar to that of the lowest income quartile in the general population. The Roma, however, are more likely to experience some discrimination. Of those who used any health services, 35% of the Roma and 4.4% of the general population encountered some discrimination, possibly discouraging the Roma to seek medical attention (Kósa *et al.*, 2007). The access to care is further exacerbated by the fact that, excluding Budapest, approximately 18.5% of the Roma live in villages without a resident family doctor.

Sufficient numbers of health care workers, particularly GPs, serving in the Roma communities in rural areas, should be ensured to improve access to health care services and to relieve the workload on currently practicing health professionals in these areas. As discussed above, in order to encourage health care professionals, policies should focus on a mix of incentives, and should not be restricted to financial incentives. Another useful practice in OECD member countries is to admit more medical students from rural areas and the Roma minority to medical schools. It is likely to have a positive medium and long-term impact on the geographical distribution of doctors as those students are more likely to practice in rural areas and Roma communities (OECD, 2008c). This could have the additional benefit of tackling discrimination and communication problems the Roma face in utilising health care services. Indeed, in 2008-09, the government implemented a programme to increase the proportion of the Roma working in the medical field to between 3 and 5% (Council of Europe, 2009). Efforts in this direction should be continued.

Although not directly related to access to health care, specific public health interventions, including health education and health promotion programmes, are needed for the Roma. Socio-economic status explains the worse health status of people in Roma settlements, but not their less healthy behaviour. Therefore, it is important to take into account cultural differences in developing public health interventions for the Roma, rather than focusing exclusively on the socio-economic status (Vokó *et al.*, 2009).

Box 4.1. **Policy recommendations to improve health outcomes and system**

Improving the quality of health care services

- Strengthen primary care through:
  - Attracting greater number of general practitioners by facilitating the purchase of practice rights in the short run and abolishing practice rights to ease the entry of young GPs into the system.
  - Encouraging group practices in which self-employed medical and paramedical health professionals are united in a single, dedicated practice, rather than solo practices.

Box 4.1. **Policy recommendations to improve health outcomes and system** *(cont.)*

- Improve provider payment systems through:
  - Replacing budget caps in various health sub-budgets with instruments that promote quality and activity.
  - Abolishing the separate financing of providers for recurrent and capital costs, which effectively separate investment decisions from the utilisation of health care services.
- Take steps towards greater care co-ordination, which would encourage providers to work in teams, share information and assume collective responsibility in a patient's health.

Keeping output inflation and costs under control and ensuring the delivery of health services

- Contain spending on pharmaceuticals through:
  - Scrutinising and monitoring the prescribing and dispensing of drugs through centralised electronic records.
  - Allowing only group visits for pharmaceutical industry representatives, which would reduce the likelihood of other arrangements between physicians and the pharmaceutical industry.
- Perform systematic health planning, needs assessments and performance measurements and utilise them in the purchasing decision of the National Health Insurance Fund Administration.
- Enhance the management of the health workforce through:
  - Setting adequate remuneration levels to retain health care professionals in the health care system.
  - Increasing the share and training of lower-skilled health care workers to take over mundane tasks performed by doctors to reduce personnel costs, improve labour productivity and relieve shortages in some specialties.

Addressing inequalities in health status and access to health care

- Strongly discourage informal payments by seeking legal sanctions.
- Improve access to care of disadvantaged groups, particularly the Roma, through:
  - Ensuring that sufficient numbers of health care workers, particularly general practitioners, serve in Roma communities in rural areas.
  - Proceeding with programmes to increase the share of the Roma in the medical field, and tackle discrimination and communication problems the Roma face in utilising health care services.

Notes

1. This indicator summarises the number of years expected to be lived in "full health" and is produced by the World Health Organization.
2. Potential years of life lost is a measure of premature mortality, calculated as the number of years lost before the age of 70. The indicator is also adjusted by excluding death that can be attributed to "external causes", such as land transport accidents, accidental falls, assaults and suicides.
3. Micro-regions in Hungary are statistical sub-regions. There are 149 micro-regions in total and Budapest is not included in the system.

4. Day care comprises health care services delivered to patients who are formally admitted to hospitals, ambulatory premises or self standing centres but with the intention to discharge the patient on the same day. An outpatient is not formally admitted to a facility (physician's private office, hospital outpatient centre or ambulatory care centre) and does not stay overnight.
5. The NHIFA is obliged to contract with providers that are approved through the capacity regulation process of the government. Family doctors are mostly private entrepreneurs and contract with local governments to serve the local population. The NHIFA in turn has an obligation to contract with family doctors who are affiliated with local governments. Institutional providers also need to contract with the NHIFA, with the contracts specifying outpatient consultation hours and the number of acute and chronic care beds.
6. This figure may be biased upwards because the overall level of total health spending is low and the amount of expenditure maybe also driven by high international prices of some cancer drugs.

Bibliography

Abi-Aad, G. (2012), "Measuring Quality in Primary Care: Health System Characteristics, Quality Indicators and Measurement Challenges", *OECD Health Working Papers*, OECD Publishing, forthcoming.

Ádány, R. (2008), "A magyar lakosság egészségi állapota, különös tekintettel az ezredforduló utáni időszakra" (The Health Status of the Hungarian Population, with Special Reference to Period after the Turn of the Millennium), *Népegészségügy* (*Public Health*), Vol. 86, No. 2.

Council of Europe (2009), *ECRI Report on Hungary (Fourth Monitoring Cycle)*, European Commission Against Racism and Intolerance (ECRI), *www.coe.int/t/dghl/monitoring/ecri/country-by-country/hungary/HUN-CbC-IV-2009-003-ENG.pdf*, accessed 16 August 2009.

Docteur, E. and H. Oxley (2003), "Health-Care Systems: Lessons from the Reform Experience", *OECD Health Working Papers*, No. 9, OECD Publishing.

EGMA (European Generics Medicines Association) (2007), "Generic Market Shares in Europe 2006", *www.egagenerics.com/doc/fac-GxMktEur_2006.pdf*, accessed 5 September 2011.

Eke, E., E. Girasek and M. Szócska (2011), "From Melting Pot to Laboratory of Change in Central Europe: Hungary and Health Workforce Migration", in M. Wismar *et al*., *Health Professional Mobility and Health Systems: Evidence from 17 European Countries*, Observatory Studies Series, No. 23, European Observatory on Health Systems and Policies.

European Commission (2010), "Joint Report on Health Systems", *European Economy: Occasional Papers*, No. 74, European Commission and the Economic Policy Committee.

Gaál, P. (2004), *Health Care Systems in Transition: Hungary*, Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, WHO Regional Office for Europe.

Gaál, P. *et al.* (2011), "Hungary: Health System Review", *Health Systems in Transition*, Vol. 13, No. 5, LSE Health and Social Care.

Gaál, P. and M. McKee (2005), "Fee-for-Service or Donation? Hungarian Perspectives on Informal Payment for Health Care", *Social Science and Medicine*, Vol. 60, No. 7.

Gál, R., Z. Mogyorósy, A. Szende and P. Szivós (2003), "Hungary Country Study", Study on the Social Protection Systems in the 13 Applicant Countries, Employment and Social Affairs DG, European Commission.

Gay, J.G. *et al*. (2011), "Mortality Amenable to Health Care in 31 OECD Countries: Estimates and Methodological Issues", *OECD Health Working Papers*, No. 55, OECD Publishing.

HCSO (Hungarian Central Statistical Office) (2009), *Statistical Yearbook of Hungary, 2008*, HCSO.

HCSO (2011), *Statistical Yearbook of Hungary, 2010*, Hungarian Central Statistical Office.

HealthMonitor (EgészségMonitor) (2010), "A szükségletre korrigált egészségügyi ellátás igénybevételének területi egyenlőtlenségei Magyarországon" (Geographical Disparities in Health Care Utilisation Controlled for Health Care Needs in Hungary), *Research Report*, HealthMonitor Research and Consulting.

Hofmarcher, M.M., H. Oxley and E. Rusticelli (2007), "Improved Health System Performance through Better Care Coordination", *OECD Health Working Papers*, No. 30, OECD Publishing.

Joumard, I., C. André and C. Nicq (2010), "Health Care Systems: Efficiency and Institutions", *OECD Economics Department Working Papers*, No. 769, OECD Publishing.

Józan, P. (2009), "Csökkenő kardiovaszkuláris mortalitás, javuló életkilátások, új epidemiológiai korszak kezdete Magyarországon" (Decreasing Cardiovascular Mortality, Starting the New Epidemiological Age in Hungary), *Informatika és menedzsment az egészségügyben*, Vol. 8, No. 4.

Kaposvari, C. and J. Vitrai (2008), "Snapshot of Health Inequities in Hungary: Small Area-Level and Social Inequities in Health Care Needs", HealthMonitor Research and Consulting.

Kertesi, G. (2000), "A cigány foglalkoztatás leépülése és szerkezeti átalakulása 1984 és 1994 között (The Decline and Restructuring of Roma Employment between 1984 and 1994)", *Közgazdasági Szemle*, No. 5, pp. 406-443.

Kopp, M.S. (2007), "The Central-Eastern European Health Paradox: Why are Men More Vulnerable in a Changing Society?", in R. Ennals (ed.), *From Slavery to Citizenship*, John Wiley and Sons.

Kósa, K., L. Daragó and R. Ádány (2009), "Environmental Survey of Segregated Habitats of Roma in Hungary: A Way to be Empowering and Reliable in Minority Research", *European Journal of Public Health*, August 2011, Vol. 21, No. 4.

Kósa, Z. *et al.* (2007), "A Comparative Health Survey of the Inhabitants of Roma Settlements in Hungary", *American Journal of Public Health*, Vol. 97, No. 5.

Kutzin J., C. Cashin and M. Jakab (eds.) (2010), *Implementing Health Financing Reform: Lessons from Countries in Transition*, Observatory Studies Series, No. 21, European Observatory on Health Systems and Policies.

Lindberg, A-L. *et al.* (2006), "Arsenic Exposure in Hungary, Romania and Slovakia", *Journal of Environmental Monitoring*, Vol. 8, No. 1.

Mahoney, M. *et al.* (2004), *Equity Focused Health Impact Assessment Framework*, Australasian Collaboration for Health Equity Impact Assessment.

Masseria, C., P. Mladovsky and C. Hernández-Quevedo (2010), "The Socio-economic Determinants of the Health Status of Roma in Comparison with Non-Roma in Bulgaria, Hungary and Romania", *European Journal of Public Health*, Vol. 20, No. 5.

McClellan, M. (2011), "Reforming Payments to Healthcare Providers: The Key to Slowing Healthcare Cost Growth While Improving Quality?", *Journal of Economic Perspectives*, Vol. 25, No. 2.

Moïse, P. and E. Docteur (2007), "Pharmaceutical Pricing and Reimbursement Policies in Sweden", *OECD Health Working Papers*, No. 28, OECD Publishing.

Nolte, E. and M. McKee (2008), "Measuring the Health of Nations: Updating an Earlier Analysis", *Health Affairs*, Vol. 27, No. 1.

OECD (2004), *Towards High-Performing Health Systems*, The OECD Health Project, OECD Publishing.

OECD (2008a), *OECD Economic Surveys: Greece 2008*, OECD Publishing.

OECD (2008b), *Pharmaceutical Pricing Policies in a Global Market*, OECD Health Policy Studies, OECD Publishing.

OECD (2008c), *The Looming Crisis in the Health Workforce: How Can OECD Countries Respond?*, OECD Health Policy Studies, OECD Publishing.

OECD (2009), *Achieving Better Value for Money in Health Care*, OECD Health Policy Studies, OECD Publishing.

OECD (2010), *Improving Value in Health Care: Measuring Quality*, OECD Health Policy Studies, OECD Publishing.

OECD (2011), *OECD Health Statistics* (database), OECD Publishing.

Orosz, E. and I. Holló (2001), "Hospitals in Hungary: The Story of Stalled Reforms", *Eurohealth*, Vol. 7, No. 3, LSE Health.

Papp, P. and F. Előry (2004), "The State of Infrastructure of Our Hospitals", *Egészségügyi Gazdasági Szemle* (*Journal of Health Economics*), Vol. 42, No. 5.

PHAMEU (2010), "Primary Health Care Activity Monitor for Europe", EU Public Health Action Programme, *www.phameu.eu*.

Simoens, S. and S. de Coster (2006), "Sustaining Generic Medicines Markets in Europe", Research Centre for Pharmaceutical Care and Pharmaco-economics, Leuven University, April.

Simoens, S. and J. Hurst (2006), "The Supply of Physician Services in OECD Countries", *OECD Health Working Papers*, No. 21, OECD Publishing.

SUMANAS (2005), "Sustainable Management and Treatment of Arsenic Bearing Groundwater in Southern Hungary", European Commission Project, LIFE05 ENV/H/000418, *www.korkovizig.hu/life*.

Sussex, J. (2004), "Principles of Capital Financing and Capital Charging in Health Care Systems", *HNP Discussion Paper*, World Bank.

Szende, A. and A.J. Culyer (2006), "The Inequity of Informal Payments for Health Care: The Case of Hungary", *Health Policy*, Vol. 75, No. 3.

Szűcs, S., A. Sárváry, M. McKee and R. Ádány (2005), "Could the High Level of Cirrhosis in Central and Eastern Europe be Due Partly to the Quality of Alcohol Consumed? An Explanatory Investigation", *Addiction*, Vol. 100, No. 4.

Tobias, M. and L. Yeh (2009), "How Much does Health Care Contribute to Health Gain and to Health Inequality? Trends in Amenable Mortality in New Zealand 1981-2004", *Australian and New Zealand Journal of Public Health*, Vol. 33, No. 1.

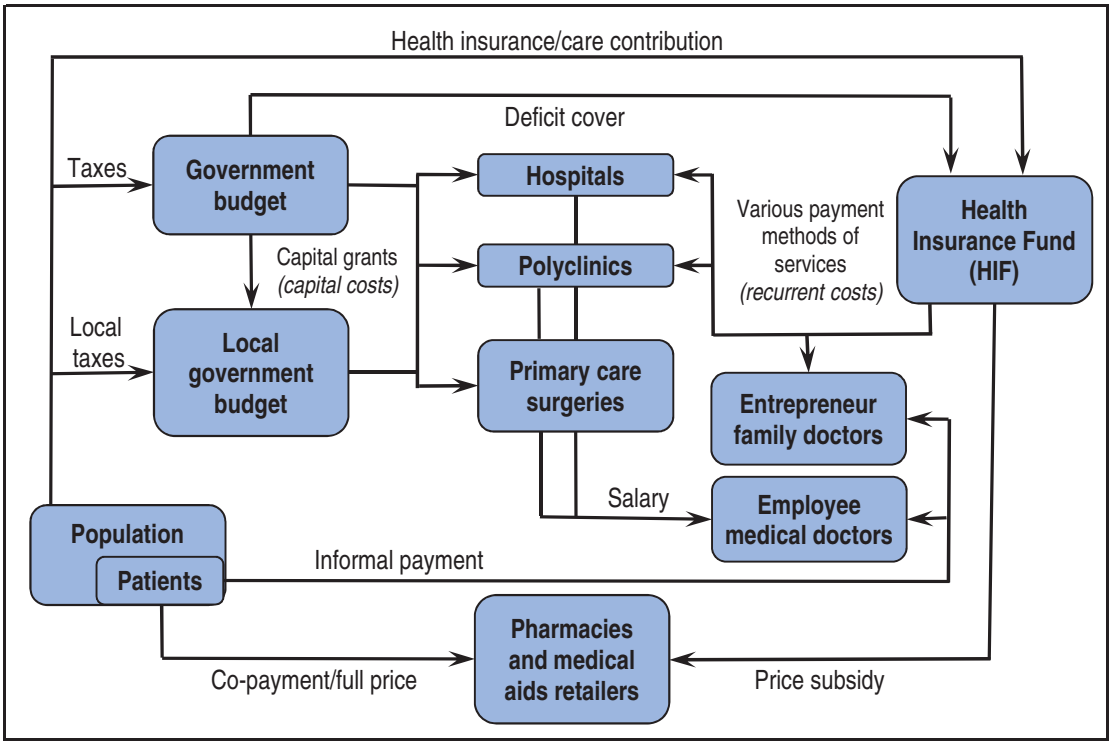
Vokó, Z. *et al.* (2009), "Does Socioeconomic Status Fully Mediate the Effect of Ethnicity on the Health of Roma People in Hungary?", *Journal of Epidemiology and Community Health*, Vol. 63, No. 6.

WHO (World Health Organization) (2008), *The World Health Report 2008. Primary Health Care (Now More Than Ever)*, WHO.

ANNEX 4.A1

Health care system organisation

Figure 4.A1.1. **Flow of funds in the health care system**



Source: P. Gaál (2004), *Health Care Systems in Transition: Hungary*, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies.

Glossary

CEEC	Central and Eastern European countries
CHF	Swiss franc
CPI	Consumer price index
CR3	Three largest banks
CT	Computed tomography
EBRD	European Bank for Reconstruction and Development
ECEC	Early childhood education and care
EIB	European Investment Bank
EPL	Employment protection legislation
EU	European Union
EUR	Euro
FSB	Financial Stability Board
FX	Foreign exchange
GDP	Gross domestic product
GP	General practitioner
HFSA	Hungarian Financial Supervisory Authority
HHI	Herfindahl Hirschman index
HHRA	Hungarian Hospital Residents' Association
HUF	Hungarian forint
IMF	International Monetary Fund
ISCED	International standard classification of education
LTC	Long-term care
LTV	Loan-to-value
MNB	Magyar Nemzeti Bank
MPC	Monetary Policy Council
MRI	Magnetic resonance imaging
NHIFA	National Health Insurance Fund Administration
NIM	Net interest margins
OHAAP	Office of Health Administration and Administrative Procedures
PES	Public employment services
PISA	Programme for international student assessment
SME	Small and medium-sized enterprises
USD	United States dollar
VAT	Value added tax
VET	Vocational education and training
WHO	World Health Organization

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The European Union takes part in the work of the OECD.

OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

OECD PUBLISHING, 2, rue André-Pascal, 75775 PARIS CEDEX 16
(10 2012 06 1 P) ISBN 978-92-64-12726-5 – No. 59915 2012

OECD Economic Surveys

HUNGARY

SPECIAL FEATURE: LABOUR MARKET

Most recent editions

Australia, November 2010
Austria, July 2011
Belgium, July 2011
Brazil, October 2011
Canada, September 2010
Chile, January 2012
China, February 2010
Czech Republic, November 2011
Denmark, January 2012
Estonia, April 2011
Euro area, December 2010
European Union, September 2009
Federal Republic of Yugoslavia, January 2003
Finland, February 2012
France, March 2011
Germany, February 2012
Greece, August 2011
Hungary, March 2012
Iceland, June 2011
India, June 2011
Indonesia, November 2010
Ireland, October 2011
Israel, December 2011
Italy, May 2011
Japan, April 2011
Korea, June 2010
Luxembourg, May 2010
Mexico, May 2011
Netherlands, June 2010
New Zealand, April 2011
Norway, February 2012
Poland, April 2010
Portugal, September 2010
Romania, October 2002
Russian Federation, December 2011
Slovak Republic, November 2010
Slovenia, February 2011
South Africa, July 2010
Spain, December 2010
Sweden, January 2011
Switzerland, January 2012
Turkey, September 2010
Ukraine, September 2007
United Kingdom, March 2011
United States, September 2010

Please cite this publication as:
OECD (2012), *OECD Economic Surveys: Hungary 2012*, OECD Publishing.
http://dx.doi.org/10.1787/eco_surveys-hun-2012-en

Volume 2012/6
March 2012

OECD publishing
www.oecd.org/publishing

ISSN 0376-6438
2012 SUBSCRIPTION (18 ISSUES)
ISSN 1995-3461
SUBSCRIPTION BY COUNTRY

ISBN 978-92-64-12726-5
10 2012 06 1 P