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The Significance of Switzerland's Enormous Current-Account Surplus

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By
Peter Jarrett and Céline Letremy

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ABSTRACT/RÉSUMÉ

The significance of Switzerland's enormous current-account surplus

Switzerland has had a long-standing surplus on its current account. But over the past 15 years that surplus has surged to levels unmatched by nearly any other OECD country at any point. This paper looks at the surplus from a balance of payments vantage point as well as from the optic of the excess of national saving over domestic investment. It then seeks possible explanations for the uptrend and assesses whether it results to any extent from market, institutional or policy failures that could call for reforms. A number of important measurement issues are raised. But the key recommendation is that the authorities should prepare for a possible sharp increase in the value of the Swiss franc if and when investors engaged in the "carry trade" unwind their positions. To that end they should examine labour, capital and product markets with a view to ensuring they are as flexible as possible and that factors are as mobile as possible, both geographically and sectorally. This will allow any necessary adjustment to a higher exchange rate to be smoothly accommodated. This Working Paper is largely extracted from the *2007 OECD Economic Survey of Switzerland* (www.oecd.org/eco/survey/switzerland).

JEL codes: E01, E21, E22, E44, E58, E65, F31, F32, O52
Keywords: current account, carry trade, Switzerland, balance of payments

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La signification du colossal excédent des paiements courants de la Suisse

La Suisse affiche depuis fort longtemps un excédent des paiements courants. Toutefois, au cours des 15 dernières années, cet excédent a atteint des niveaux quasiment sans précédent pour la zone OCDE. Dans le présent document, nous examinons cet excédent tant sous l'angle de la balance des paiements que dans l'optique de l'excédent de l'épargne nationale sur l'investissement intérieur. Nous recherchons ensuite les explications possibles de cette hausse, et tentons de déterminer si elle résulte dans quelque mesure que ce soit de défaillances des marchés, des institutions ou de l'action publique pouvant exiger la mise en œuvre de réformes. Nous soulevons divers problèmes de mesure importants, mais notre principale recommandation est que les autorités devraient se préparer à la forte appréciation du franc suisse qui pourrait se produire dès lors que les investisseurs engagés dans des opérations de portage (« carry trade ») dénoueraient leurs positions. Dans cette optique, elles devraient examiner la situation des marchés du travail, des capitaux et des produits afin de veiller à ce qu'ils soient aussi flexibles que possible et à ce que la mobilité des facteurs de production soit maximale, tant en termes géographiques que sectoriels. Cela permettra un ajustement en douceur de l'économie en cas de hausse du taux de change. Ce Document de travail est largement extrait de *l'Étude économique de l'OCDE de la Suisse 2007* (www.oecd.org/eco/etudes/suisse).

Classification JEL : E01, E21, E22, E44, E58, E65, F31, F32, O52
Mots clés : compte courant, carry trade, Suisse, balance des paiements

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The significance of Switzerland's enormous current-account surplus

By
Peter Jarrett and Céline Letremy[1]

Recent developments in Switzerland's balance of payments

A traditionally sizeable external surplus has been on an uptrend since 1991 and has surged since 2002

Switzerland has traditionally recorded a surplus on its current external account. Prior to the 1990s that surplus showed no particular trend as a share of its GDP, averaging around 4%. However, beginning in 1991 it began what has been an almost uninterrupted ascent, culminating in the extraordinary figure of 15.1% of GDP in 2006 (Figure 1).[2] Indeed, this figure is unsurpassed in the history of OECD countries with the exception of Norway, though only in 2006 (thanks to its substantial oil revenues). But Switzerland has no significant natural resources. Its surplus should therefore be more amenable to analysis using the economist's normal toolkit. The question to be faced here is what has caused this development and whether the surplus is appropriate for Switzerland, or, if not, what market or policy failures might be operating, and what should be done to remedy the situation.

Taking the normal balance of payments components of the current account, it is obvious that, even if goods and especially non-factor services[3] have likewise been in gently rising surplus over the past 15 years, the main driver of the surging current-account surplus has been factor income and investment income in particular.[4] Indeed, the CHF 57.3 billion balance on investment income in 2006 represented 80% of the total surplus (Table 1); that outcome was exceeded only by those recorded by Japan and the

1. The authors are, respectively, Head of Division in the Country Studies Branch of the OECD Economics Department and Economist in the French Ministry of the Environment and formerly a consultant at the OECD. This paper was originally produced for the OECD Economic Survey of Switzerland, published in November 2007 under the responsibility of the Economic and Development Review Committee. The authors are thankful to Val Koromzay, Andrew Dean, Andrés Fuentes and Claude Giorno for their helpful comments, as well as to Françoise Correia and Mee-Lan Frank for excellent technical assistance.

2. Preliminary data for the first three quarters of 2007 show the surplus rose to 17.5% of GDP, even though net investment income fell: a shrinking deficit on current transfers as well as rising surpluses on both goods and services (no doubt related to improved competitiveness) lie behind the increase.

3. The 2006 surplus on non-factor services account of CHF 33.2 billion was led by net earnings of CHF 13.1 billion on financial services, attributable to the strength of Swiss financial institutions, especially the banks.

4. Labour income is in deficit because of the heavy proportion of frontier workers among the work force and the resulting cross-border salary payments.

United Kingdom. Those receipts are first and foremost from direct investment, but with a substantial presence of portfolio and other investment income receipts as well. Furthermore, even though of course Switzerland's accounts follow international methodological norms, those guidelines lead to significant distortions in its case[5]: profits earned abroad by Swiss-based multinational enterprises are attributed to Switzerland, even if the ultimate owners of those firms are to a large extent resident abroad (think of the many investors in, for example, Nestlé reside outside Switzerland). While it is not possible to be precise, central bank calculations show that correction for this factor on the payments side of the ledger alone would cut the current-account surplus by some 4¼ percentage points of GDP, leaving the true balance in 2006 closer to 11% of GDP (SNB, 2007a, Table 9). The IMF estimates that it could be as much as 7 points of GDP (IMF, 2007). Of course these are gross figures, and the same distortion is in the data for other countries and for Swiss portfolio holders of shares in foreign multinationals. Indeed, using figures provided in the annual SNB report on the 2006 balance of payments,[6] the corresponding correction on the receipts side would probably be nearly 1½ percentage points of GDP, leaving the net adjustment at less than 3 percentage points of GDP and the adjusted current account at around 12½ per cent of GDP.

On the financial account the numerous large Swiss multinational enterprises manage to earn significant profits, leading to outsized net outflows of direct investment; in 2006, this was offset to some extent by inward direct investment in Switzerland.[7] Otherwise portfolio flows in both debt and equity form go predominantly abroad; they dwarf their counterpart flows into Switzerland. This is consistent with a portfolio diversification explanation of these capital flows: as elsewhere, home bias (unexploited diversification potential) has been decreasing steadily but is believed not to have been entirely eliminated. The other items on the financial account represent mainly corporate and commercial account borrowing and lending activities. In 2006 they were primarily increases in liabilities of Swiss banks and non-financial enterprises to foreign banks. Finally, the accumulation of reserve assets has often been another counterpart of the current-account surplus, but in 2006 they were largely unchanged. This conforms to the pattern of the evolution of the franc: under semi-constant upward pressure in most of the post-Bretton Woods era, its uptrend seems to have come to an end several years ago, together with the steady rise in what has become known as the "carry trade", discussed further below. Against the euro its value was falling from early 2003 until late 2007, cumulatively by nearly 8% on an effective basis.

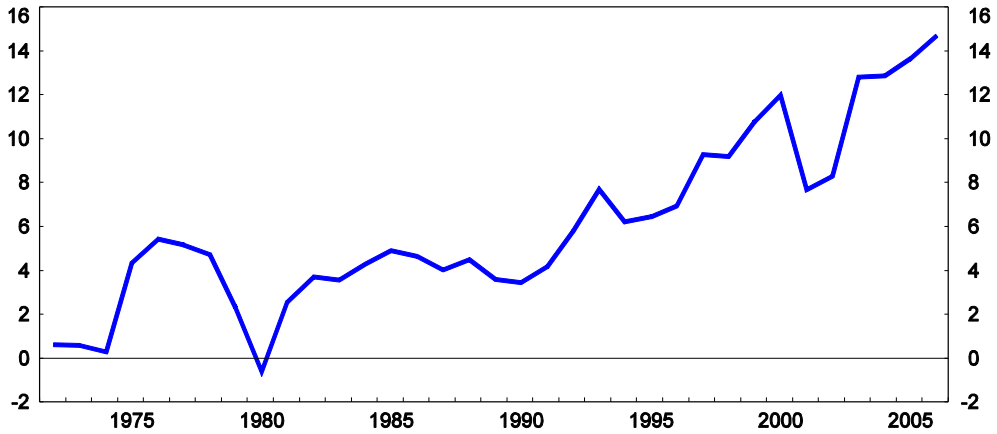
5. Another similar distortion comes through net direct investment income earned by foreign controlled finance and holding companies: they earn income from foreign subsidiaries and pay it to foreign parents, with what has turned out to be a small but increasing impact on Switzerland's aggregate current account – an average of CHF 3 billion from 2000 to 2004, but nearly CHF 14 billion in 2005.

6. Such figures comprise the fact that the ratio of Swiss portfolio investment in foreign shares to foreign investment in Swiss shares (CHF 747 billion) is one-third; that foreign companies have a higher dividend payout ratio than Swiss companies (assumed here to be one-half, rather than one-third); and that the proportion of earnings of Swiss companies that are attributable to foreign shareholders is CHF 19.5 billion.

7. Indeed, the net outflow of direct investment reversed toward the end of 2006, as Swiss movements of equity capital abroad slowed more than the corresponding shrinkage in foreign flows into Switzerland.

Figure 1. **Evolution of the current account**

As a percentage of GDP



Source: OECD, Main Economic Indicators database.

Table 1. **Switzerland's balance of payments in 2006**

CHF billions

		Capital transfers, net	-3.4
Current account	71.7	Financial account	-91.1
of which:		*of which*:	
Goods	5.1	Direct investment	-54.6
Non-factor services	33.2	*of which*:	
of which:		Equity capital	-40.6
Tourism	1.0	Reinvested earnings	-10.5
Financial services	13.1	Portfolio investment	-53.5
Labour income	-11.0	*of which*:	
Investment income	57.3	Debt securities	-36.7
of which:		Equity securities	-16.8
Direct investment	39.3	Other investment	21.2
Portfolio investment	13.9	*of which*:	
Current transfers	-12.9	Commercial bank lending	23.5
		Corporate lending	15.1
		Change in reserve assets	-0.4
		Net errors and omissions	22.9

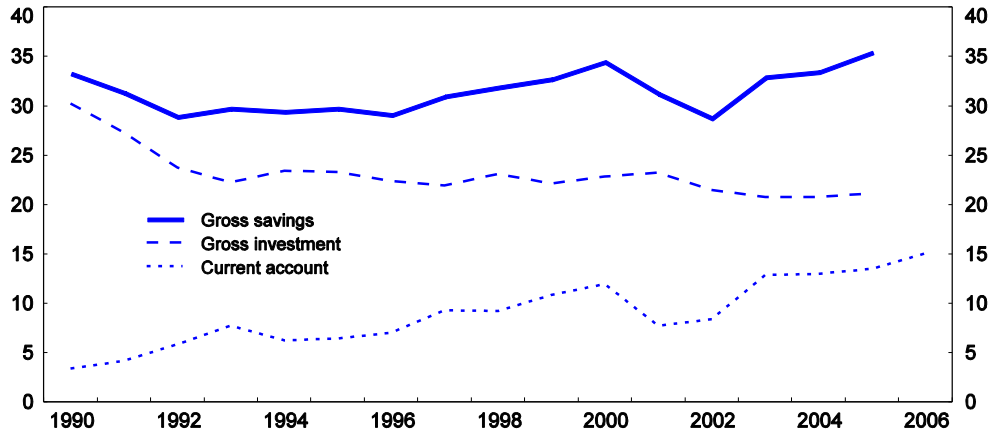
Source: Swiss National Bank (2008), "Swiss balance of payments in Q3 2007".

In the last decade the rise in the surplus has been mainly driven by higher domestic saving

The current account is also the excess of gross national saving over gross domestic investment. While in the early 1990s both aggregates were falling in relation to GDP, the national saving rate began to rise around the middle of the 1990s, reaching around 35% of GDP by 2000 (Figure 2), although this figure might be overestimated due to the share foreigners hold in Swiss multinationals. The investment share showed no such uptrend, with the result that the current account surged. Following a brief interruption in 2001-02, when the saving ratio fell, the investment share too began to shrink in 2002, and the difference between the two resumed its rise. It is as yet unknown which component lies behind the most recent jump in the surplus, as no savings/investment data are as yet available for 2006.

Figure 2. **Trend in savings, investment and net current account**

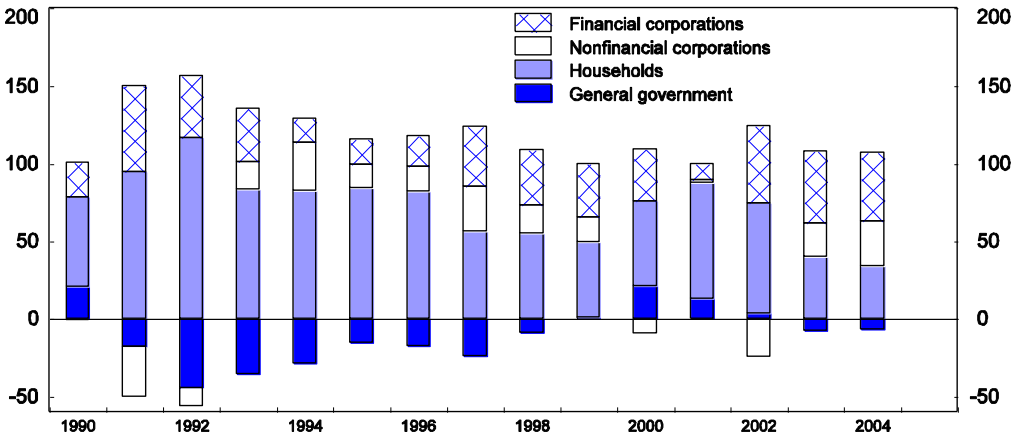
As a percentage of GDP



Source: Federal Statistical Office and OECD, Annual National Accounts database.

Figure 3. **Split of the saving surplus in the Swiss economy**

As a percentage of total net saving



Source: Federal Statistical Office and OECD, Annual National Accounts database.

That increase in saving is largely attributable to financial corporations and, more recently, government

Taking a closer look by economic agents (Figure 3), it is households that have traditionally contributed the largest share of the excess of saving over investment, although their share has been shrinking in recent years. This is partly because of the well developed and mature pension system: second-pillar pension savings are around half of household financial wealth.[8] Government incurred a saving shortfall for most of the 1990s, then ran a series of surpluses before returning to deficit in 2003-04; while outcomes thereafter are not definitive, it seems highly likely that general government saving returned

8. Total pension fund assets and life insurance investments were already over 150% of GDP in 2004, the highest ratio in the OECD. The Federal Office of Social Security sets some ceilings on the share of pension fund assets that can be invested offshore. For the system as a whole that share is currently around one half and rising.

to the black in 2005-06. At the same time, government investment has been dropping steadily relative to GDP since the early 1990s, with a cumulative decline of around 1¼ percentage points of GDP (about a third of its level in 1991). Not surprisingly, corporations' outcomes have been highly correlated with the business cycle, although mainly for the non-financial component. For their part, financial corporations have made a larger absolute contribution to the excess than their non-financial counterparts throughout the past decade. Indeed, in recent years they have overtaken households[9] and thereby taken the top position in terms of responsibility for the savings surplus.[10] Most of the action lies on the saving side of the ledger: corporations have been raising the share of their income saved since the last recession (as they have done in most OECD countries), as manifest in surging profitability. Combined with fairly steady investment rates, the result has been a declining share of corporate saving that is invested, especially in net terms. Firms have preferred to distribute dividends or to strengthen their balance sheets by paying down debt. In so doing they may have made themselves attractive targets for future foreign takeovers, particularly by private equity firms.

Because Switzerland has run such persistent surpluses on its current account, offset by capital outflows, it has accumulated a huge net international investment position (CHF 668.7 billion or 131.7% of GDP at Q3 2007, the highest ratio to GDP in the OECD).[11] For that matter it has extremely large positions on both gross assets[12] and liabilities by OECD standards, surpassed as a share of GDP only by Ireland (Figure 4). These positions generate the significant investment income flows described above. According to the Swiss National Bank (SNB), which compiles the balance of payments and the investment position statistics, the largest share of gross assets is held in the form of loans and other foreign assets (37%), followed by portfolio investment (36%), direct investment (21%), derivatives and structured products (4%) and finally reserve assets (3%). As to liabilities, nearly one half are bank and other company loans. Once the net position is calculated, Switzerland finds itself mainly holding positions in direct investment (65%) and portfolio investment (26%). However, the latter is an unbalanced mix comprising debt securities (82%), partly offset by a negative position in equity securities (-57%). A breakdown by currency[13] shows that a plurality of assets is held in US dollar form, followed fairly closely by those in euros. A majority of liabilities is held in Swiss francs, with both dollars and euros well behind. Finally, only a limited disaggregation by institutional sector is available, but it shows that over 15% of the net foreign assets belong to Swiss banks, just slightly more than what is owned by the SNB. Noteworthy is the steady increase in the government's net foreign liability position in recent years: it rose from around CHF 10 billion at end-2001 to CHF 53 billion at end-2006, despite the improvement in the fiscal balance.

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9. Part of the reason for weakness in household saving in recent years is the decline in mandatory saving whose share of households' gross disposable income fell from over 10% in most of the 1990s to around 7% in 2002-04. Voluntary saving took up the slack in 2000-01, keeping the aggregate rate near 16% but has likewise fallen back since then, leaving the total rate around 14%.

10. The institutional shares in 2004 were: 44% for financial corporations, 34% for households, 29% for non-financial corporations and -7% for general government.

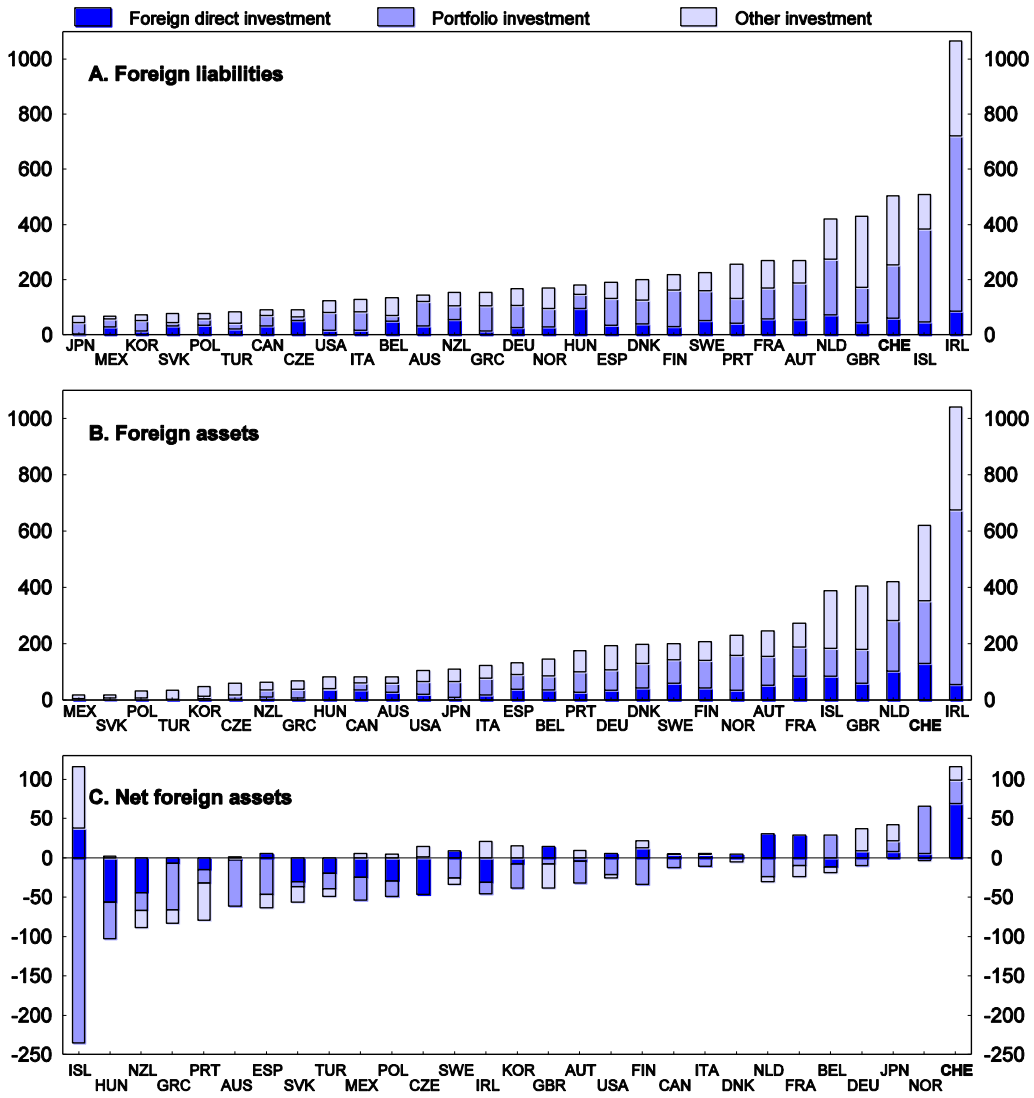
11. Such a large net asset position is nothing new for Switzerland: SNB officials believe it to have been around 100% of GDP also before World War I.

12. Assets of non-residents managed by banks in Switzerland are of course not included in its net international investment position. However, if non-Swiss high net-worth individuals move their economic centre of interest to Switzerland (as many have done to take advantage of attractive tax regimes), then their assets would, in principle, be considered as Swiss. Nevertheless, the SNB believes that such cases do not play a significant role in the evolution of the net foreign asset position, even if they could contribute to its level.

13. The share of foreign-currency assets rose from 62% in 1985 to 87% in 2005 and then edged back to 82% in 2006, while the share of liabilities in foreign currencies fell in the first decade and then rebounded to 45% in 2005 before falling back to 42% in 2006 (SNB, 2007a and 2007b).

Figure 4. **International investment positions**

Per cent of GDP, 2006 or latest available year[1]



1. 2005 for Ireland, Sweden; 2003 for Slovak Republic.

Source: IMF, International Financial Statistics database and OECD calculations from Economic Outlook 82 database.

But easily the most puzzling feature of these accounts is the fact that these large and persistent current-account surpluses have failed to lead to corresponding increases in Switzerland's net asset position (Stoffels and Tille, 2007; SNB, 2007b).[14] This "disconnect" began at the turn of the millennium: since end-1999 – and only until 2006 – cumulative net financial outflows represent 85.4% of 2006 GDP, but SNB estimates of net foreign assets have risen by a meagre 11.6% of that GDP. The discrepancy amounts to more than CHF 350 billion or about CHF 50 billion per year. Starting two years later, as the SNB (2007b) does, leaves a stock-flow discrepancy averaging over CHF 60 billion per year. For example,

14. This was sufficiently puzzling that the SNB decided to include a special section in their annual publication on the international investment position dealing with the divergence – see SNB (2007b, pp. 11-13).

in 2006 alone, when the financial account recorded an outflow of CHF 91 billion and the current account a surplus of CHF 72 billion the SNB shows that the net investment position rose by only CHF 3 billion.

A number of possible explanations come to mind:

- *Valuation changes.* Changing exchange rates clearly prevent the change in the stocks from equalling the flows. Since most assets are in foreign currency and most liabilities in francs, it is clear that if the franc appreciates the value of Swiss holdings will suffer the consequences. From 1999 to 2006 an increase of the exchange rate was indeed observed. According to the SNB (2007b), such exchange-rate losses have been worth an average of CHF 28 billion since 2002. Secondly, and this may be the major explanation for the outcomes in 2005 and 2006, there are valuation gains and losses on foreign holdings of equity in Switzerland and on Swiss holdings of equity abroad. In a longer-term perspective, according to Stoffels and Tille (2007), such valuation effects can explain only a part (around 30%) of the discrepancy on the net position (with 23% and 7% attributable to exchange rates and asset prices fluctuations, respectively). With direct investment at estimated market values (and not at book values as in international investment position statistics), their calculations show that valuation effects are somewhat more successful, accounting for almost exactly half of the total to be explained. For its part, the SNB (2007b) attributes more than CHF 20 billion per year to such capital losses (about one-third of the total).

- *Measurement problems*. One obvious distortion is that official Swiss data are calculated using only book-value estimates for foreign direct investment. However, Stoffels and Tille (2007) attempt an approximation to a market-value adjustment and find that the correction would go the wrong way: the net position would actually *worsen* by 33.8% of 2005 GDP, rather than the small improvement in the official data.[15] Other methodological questions arise from the SNB's periodic improvements to their procedures. For example, the survey used to estimate direct investment positions was broadened in 2004, resulting in a CHF 11.3 billion reduction in net foreign assets (some 2.5 % of 2005 GDP), without any corresponding change in the financial flows (Stoffels and Tille, 2007, footnote 24).[16] Overall, SNB (2007b) argued that once valuation changes are properly accounted for, only CHF 12 billion per year of non-identified changes remain (less than a quarter of the total). Similarly, the flow data might have missed certain items, such as the repayment of principal on foreign bonds at maturity. This would be consistent with the sizeable positive errors and omissions in the balance of payments (an excess of net financial outflows over the current-account surplus, abstracting from capital transfers).

Taking the valuation effects year by year it appears that exchange-rate changes played a fairly important role in 2001-04 and 2006, but franc depreciation in 2005 goes in the wrong direction. Broad indexes of asset prices point to underperformance for Swiss investors abroad relative to foreigners in

15. The Stoffels and Tille approach was to adjust assets and liabilities for valuation changes using broad share price indexes. For direct investment holdings by foreign investors the Swiss share price index was appropriately used. However, they used share price indexes of relevant destination countries for Swiss direct investments abroad, this during a period (1999-2005) when the latter fell while the former rose. It is debatable whether such indexes would have been an unbiased depiction of the underlying value of those holdings. It might even be argued that Swiss share prices might have been a better indicator of such price movements.

16. Since 1999, several other significant statistical revisions affecting Switzerland's international investment position have taken place. Also, sometimes funds are moved in and out of the country without corresponding financial flows; this too could help explain some of the discrepancy.

Switzerland mainly in 2000, 2005 and 2006. Notice, however, that prior to 1998 the financial flows on some holdings were essentially computed as the change in positions (Stoffels and Tille, 2007).

The next question to be considered arising from this disconnect is what are the implications for the returns that the nation is earning. These returns comprise the straightforward yields, as measured in the investment income accounts, plus the valuation changes. Stoffels and Tille (2007) show that, taking the six years 2000 to 2005, yields alone were higher on Swiss assets than on its liabilities by more than a full percentage point,[17] much as it has been for the United States (Jarrett, 2005). However, once just measured valuation gains and losses are brought into the picture, their estimate of the gap becomes -0.8 percentage point. Hence, if these figures are to be believed, Swiss investors who placed money abroad for portfolio diversification and rate-of-return considerations fared much worse than foreign investors who bet on the Swiss market, even though the latter heavily reflects returns in the already mature and capital-intensive Swiss economy

What could be causing this huge surplus?

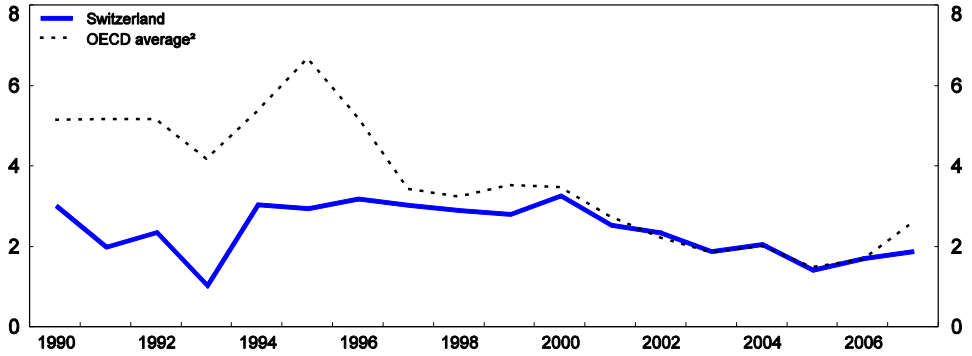
Since the current-account surplus is such a long-standing feature of the Swiss external accounts, whatever is causing it cannot be entirely a recent phenomenon. But until the last 15 years or so it averaged less than 4% of GDP, a figure that is frequently seen in many other OECD countries. It is truly the upsurge since the early 1990s that is unusual and demanding of interpretation. As seen above, the nation's saving rate increased from 1992 to 2000, then plunged before rebounding. But it is – at some 36% of GDP in 2005 – amongst the highest in the OECD (along with Norway and Korea), some three times as high as those near the bottom of the scale (though the official Swiss figure is probably biased up by the aforementioned measurement error). To what might this be attributed? Unlike Norway, whose current income level is undoubtedly in excess of long-term levels thanks to its oil revenues, it would not normally make sense to seek a "permanent income" view of the surplus. Theoretically, differential demographics could help to explain some of the gap, but the evidence is fairly clear that the speed of future ageing pressures is no more rapid in Switzerland than elsewhere in the OECD, arguably less so (OECD, 2006a).

There are some more promising lines of reasoning, however. *First*, it is well known that Switzerland has a well developed system of mandatory second-pillar retirement saving. Such saving represents half of overall household saving and about 15% of gross national saving, though its share was much greater in the 1990s. These pension funds (along with life insurance investments) held assets worth more than 150% of GDP already in 2004, the highest GDP share in the OECD. Around 44% of those assets were held abroad at that point, the majority of which in foreign currencies. There is no need as yet to disburse the earnings on these holdings, and it would be difficult to find attractive investment opportunities for them on domestic markets. *Second*, there is a multiplicative component to the first, as the corresponding tax burden is shifted forward in time: the typical regime in Switzerland for taxing retirement saving is EET (*i.e*. contributions, accrued returns and ultimate pension payments are exempt, exempt and taxable, respectively), which is generous but not unusual (and this generosity might not have much effect on *national* saving,

17. For the most recent five years SNB figures show that Swiss investors earned average annual returns of 4% on their foreign assets, but only 2.5% once direct investment (9.9%) is excluded.

Figure 5. **Real long-term interest rate**[1]

Per cent



1. Defined as the yield on 10-year government bond minus the lagged percentage increase in the GDP deflator.
2. Czech Republic, Greece, Hungary, Luxembourg, Poland, Slovak Republic and Switzerland excluded.

Source: OECD, Economic Outlook 82.

since the tax advantage might merely shift the saving from the public to the private sector[18]). But even an unremarkable regime may be unusual when combined with a large mandatory component. Furthermore, pension savings are not subject to estate duties (OECD, 1999, Box 1). And because there is no capital gains tax on portfolio investment by households and pension funds,[19] saving is treated more generously than in countries having such a tax. *Third*, since most foreign assets are denominated in foreign currencies, whose emitters have traditionally had higher interest rates than Switzerland (in order to compensate investors for their higher average inflation rates), and, conversely, most liabilities are in Swiss francs, part of the net inflow of interest income (and the higher national saving that is its counterpart) is merely what amounts to a return of capital to Swiss lenders. According to unpublished central-bank estimates, this could be as much as CHF 20 billion per year (4.4% of GDP, around one quarter of the total current-account surplus). On the other hand, however, when the saving does not involve foreign assets, it is to expected real domestic interest rates and returns that saving responds. While *ex ante* rates are difficult to observe, *ex post* real rates in Switzerland have traditionally been low by OECD standards, but that gap, at least for long-term government bonds, fell sharply about a decade ago, and local rates are now virtually indistinguishable from the OECD average when measured – even if crudely – using only a single period's inflation rate (Figure 5).[20] Hence, perhaps there has been some increase in relative incentives to save,

18. The force of this argument may be less in the Swiss case, since its strong budget-balance rules have arguably restrained any resulting public dis-saving.

19. Capital gains by households are hardly ever taxable when money is put into shares of companies listed on the stock exchange, as these companies may be considered as ever lasting. The situation becomes much more complicated in all other circumstances. In any case, all cantons have capital gains taxes on real estate.

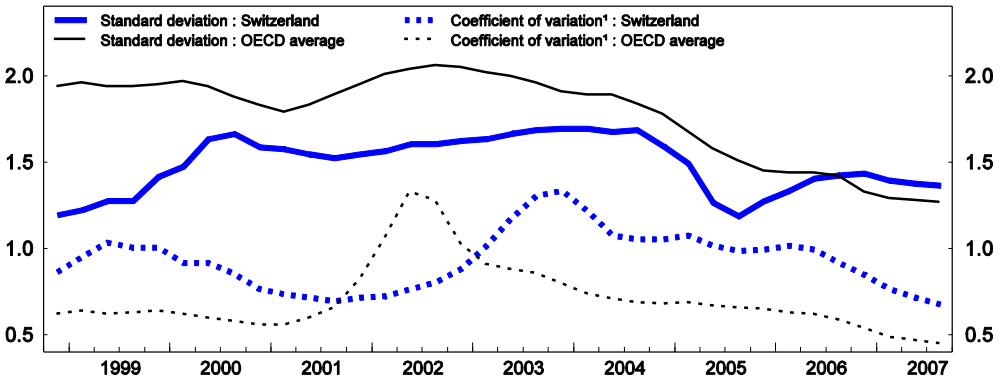
20. There is a growing literature that has looked at the question of international equalisation of real rates of return on financial assets. It shows that such returns are indeed equalised for equities but not for fixed-income instruments nor deposits: those denominated in Swiss francs have earned significantly lower returns, even in the long run (Kugler and Weder, 2003). This violation of real interest-rate parity is found to be due to a failure of uncovered interest rate parity even in the long run, rather than to deviations from purchasing power parity: the Swiss franc does not appreciate enough to offset the short-term interest rate differential. This is unique among major currencies (Kugler and Weder, 2005), even if other creditor countries also experience some degree of home bias. Global investors seem willing to pay a premium for possibly three reasons: *first*, because there has been less price-level uncertainty for Swiss assets, because the monetary authorities have kept inflation so low; *second*, because Swiss franc assets seem to provide unique diversification benefits (Kugler and Weder, 2004); and, *third*, so as to avoid the effects of very rare

resulting from a reduced willingness of foreigners to hold Swiss assets at lower expected real rates of return. *Finally*, saving can include a precautionary motive, in which case it should respond positively to income volatility. An admittedly imperfect proxy for that would be the volatility of real GDP growth. Using the standard deviation of real growth (Figure 6), it can be seen that Switzerland's economy is less volatile than the average but that its advantage has been diminishing steadily and has effectively disappeared during the past year or two. Even that measure is not uniquely identified, however, as the standard deviation suffers from a scaling problem: using the coefficient of variation instead, Switzerland's volatility has in fact been mostly greater than in the average OECD country.

In a longer-term perspective, the modest level of Switzerland's investment rate also looks worthy of interest: the investment share of GDP fell sharply during the early-1990s recession (by about 8 percentage points of GDP), remained fairly steady during the subsequent upswing and then declined again in the most recent downturn, reaching a level little more than 20% of GDP. The average OECD country followed a similar pattern, but its declines were far more modest and the rebounds sharper. Thus, Switzerland shifted from being a higher-than-average investor to a sub-par investor initially in 1999 and then more emphatically from 2003. By 2004-05 its shortfall from the simple average of OECD countries was more than a full percentage point of GDP, a switch of 6 percentage points since 1990.

Figure 6. **Volatility in real GDP growth**

Four quarterly growth



1. The standard deviation divided by the mean.

Source: OECD.

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catastrophic events (such as a war) that they perceive would have an asymmetric impact on Swiss assets because of the nation's long-standing neutrality. Concretely, if such a shock were to transpire, the Swiss franc would be expected to appreciate, perhaps sharply. Another explanation – that the premium is attributable to Swiss banking secrecy – is less convincing, since the return anomaly is also present in Swiss franc Euro-deposits, which are beyond the reach of Swiss law. Finally, if the explanation were to lie with real structural factors such as higher capital intensity with decreasing marginal returns or productivity differences between the tradeables and non-tradeables sectors (Balassa-Samuelson-type effects), it would be purchasing power parity that would fail to hold, since the real exchange-rate appreciation would be sufficient to explain the failure of uncovered interest parity. In any case, what has not yet been researched is to what extent the lower-returns phenomenon still holds: the data used by the cited authors to establish it covered the period 1980 to 2003, but the "carry trade" really got underway only at the very end of the sample period; the franc was falling from 2003 to 2007; and there was a steady shorting of the franc in futures markets as from 2005 (see footnote 26 below). The time since the last major global disruption continues to lengthen, and investors surely attribute an ever-declining probability of any recurrence.

In many quarters in Switzerland it is believed that the low investment rate is explained by the country's maturity and income level: it is argued that the prospective returns on capital are likely to be lower in Switzerland than in many other parts of the world because the existing capital stock is already high in relation to output levels. However, the evidence linking investment rates and income levels is moderate, though Switzerland does not appear to be an outlier.[21] Also, while official statistical agencies make different methodological assumptions to generate aggregate national capital stock series,[22] and hence substantial caution in making international comparisons is called for, it can be seen that indeed capital intensity seems rather high in Switzerland.[23] The question that remains is why a mature economy cannot exploit its central location and well educated labour force, along with well developed financial markets to sustain fairly high rates of investment. Low investment at home may be attributable more to a lack of effective competition (in economists' terms: "the quiet life" for incumbents, who try to reduce supply so as to raise prices) – which may or may not be linked to weak or even negative capital productivity growth – and poor prospects for new entrants in existing industries (network industries in particular), as well as in innovative sunrise sectors (Alesina *et al*., 2003; OECD, 2006b). However, it may also be explained in part by: *i*) a reduction in risk premia abroad, owing primarily to successful disinflation, that has led to some diversion of global capital flows away from Switzerland; and *ii*) the high price level, which encourages servicing the Swiss market by exports from abroad rather than inward direct investment, thus limiting gross fixed capital formation.

Another approach in trying to explain the enormity of the surplus is to look at its components and of absorption in particular. As seen above, the growing size of Switzerland's current-account surplus is only to a small extent attributable to its goods and non-factor services accounts, on which surpluses have grown due to slower Swiss GDP growth than in major trading partners as well as a trend improvement in Swiss competitiveness. Export performance was very strong until 1985, but thereafter it weakened steadily. In effect the gains in competitiveness due to the steadily lower rate of inflation were offset by increases in the Swiss franc's exchange rate. The franc appreciated at an average rate of some 4% per year from 1970 to 2003, but most of that was offset by the favourable CPI inflation differential, leaving an average annual real rise of some 1¼ per cent. However, beginning around 2002-03 the trend appreciation came to an end, and the deterioration in export performance did likewise a year or two later.[24] Following the franc's peak in early 2003 it fell cumulatively by around 8% in nominal effective terms and by 12% in real (CPI) effective terms until its trough in late 2007; since then it has recovered a good bit of that fall. The result is that there were then claims that the franc was somewhat undervalued: the IMF (2007), for example, stated that it may have been up to 20% undervalued, even if its equilibrium may have fallen because it may no longer be seen to the same extent as a safe-haven currency and it clearly is little used any more as an official reserve currency.[25]

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21. Regressing the investment/GDP ratio in current prices on per capita GDP in purchasing-power parities across the 30 OECD Member countries for the average values from 2000 to 2005 in either linear or log-linear form results in a marginally significant negative coefficient on per capita output with a t-ratio of close to 2 and a very small positive residual for Switzerland. Reverse causality may bias the coefficient estimate towards zero.

22. It would be even more dubious to try to compare *ex ante* rates of return to capital across countries.

23. An additional reason for caution here, however, is that the OECD has shifted away from the use of capital *stock* series in its modelling exercises in favour of a capital-services approach (Beffy *et al*., 2006). But no such data existed for Switzerland until very recently.

24. In fact, preliminary data for recent quarters show a steady improvement in export performance and in the trade balance: in 2007 it reached CHF 13.9 billion, 76% higher than the 2005 outcome.

25. Recent work at the BIS (Cairns *et al.*, 2007) shows that the franc remains the currency of choice (along with the euro) when volatility increases. Nevertheless, BIS figures show the franc's share of global reserve holdings had already fallen to negligible levels by the mid-1990s (Wooldridge, 2006).

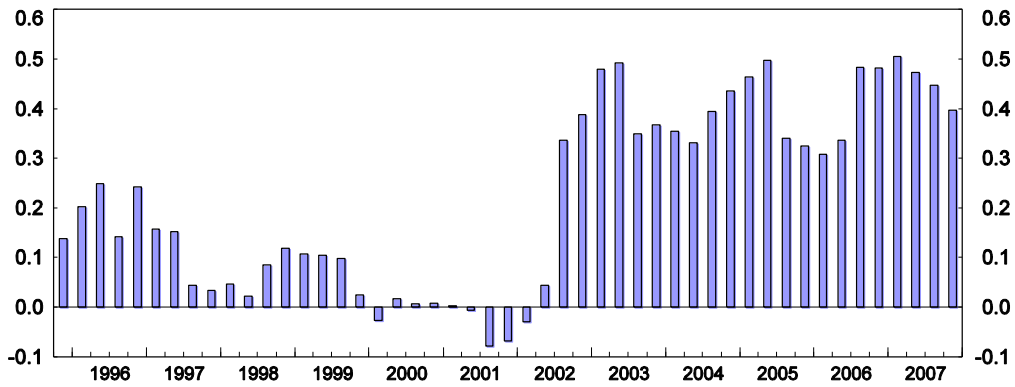
The "carry trade" is the label given to the transactions that involve (often leveraged) borrowing of low-yielding currencies like the franc and more particularly the yen in favour of assets denominated in high-return currencies such as the New Zealand dollar but also those from emerging markets. Of course, normally low-yielding currencies are expected to appreciate, else nobody would willingly hold them, but in recent years various classes of investors have been willing to take on the currency risk and undertake such trading without hedging.[26] Indeed, the common element between trading in the yen and the franc can be demonstrated by looking at daily exchange-rate changes for the two monies: for the past five and a half years these have become significantly positively correlated, whereas previously there had been no such relationship (Figure 7). The result of the increase in carry trading is that the stock of outstanding bank lending in francs to foreign non-bank private borrowers is estimated to have reached some $138 billion at end-September 2006, up from a steady $35 to $40 billion during the decade ending in 1998. Of course risk appetites do change, but even though most analysts have been predicting a return to form for the franc for quite some time – in part because the SNB has been busily putting up its official rates – the temptation to maintain the heretofore profitable strategy was sufficient to sustain it until late in 2007. And franc weakness began to worry SNB senior officials who took note of its direct impact on Switzerland's import prices and its indirect effect on tradeables prices more generally (McCormick, 2007). But with the intensifying global financial turmoil of recent months, many investors seem to have unwound their bets against the franc, and it has rebounded against the euro and surged against the dollar.

While in the yen's case, the purchased assets are to be found around the world, it seems that most of the franc borrowing has ended up in mortgage and other private lending in Central and Eastern Europe, especially in Austria,[27] Hungary, Croatia and Poland. Most of this has been undertaken by Austrian banks; Swiss banks are believed to have limited direct exposure. But apparently franc-denominated lending has even become popular in Denmark, with outstanding loans reaching DKR 20 billion (nearly 3 billion euros) in 2006 (Bernstein, 2007). In any case, it could be argued that transactions involving borrowing by residents of a high interest-rate country in a low-yielding currency like the franc to purchase domestic assets are qualitatively different from leveraged activities by financial players typically involving derivative contracts, if only because the investments are not likely to be unwound quickly (BIS, 2007).

26. Indeed, some investors go so far as to short low-yielding currencies to speculate that the carry trade will dominate longer-run fundamentals. Swiss franc futures contracts on the Chicago Mercantile Exchange (CME) were showing a substantial net non-commercial short position outstanding in 2005-07. Indeed, the magnitude of that net position reached a record level of nearly 80 000 contracts on 19 June 2007, which, at a value of CHF 125 000 per contract, implied a bet of nearly CHF 10 billion against the franc. Higher CME short positions have tended to presage downward movements in the currency against the dollar.

27. Tzanninis (2005) points out that loans to Austrian households in foreign currencies have surged since the mid-1990s, reaching nearly 30 billion euros (30% of outstanding loans) by early 2005. Nearly all of these loans are in Swiss francs. Franc-denominated loans to all non-banks totalled more than 40 billion euros already at that point.

Figure 7. **The yen and Swiss franc have moved together in the past five years**[1]



1. Correlation coefficient between daily exchange-rate changes of the dollar/yen and dollar/Swiss franc in a rolling one-year window ending in the quarter in question.

Source: OECD.

The implications for public policy

To sum up to this point: Switzerland has an unusually large current-account surplus which, even though it implies a possible disequilibrium, is clearly not something that elicits sustainability concerns, since there is no limit to a nation's acquisition of net foreign assets. If there are indeed fundamental drivers such as differences in rates of time preference between Swiss and foreigners, then policy-makers should look no further. However, even though no evidence is available on this question, it would be unwise to rely entirely on the existence of such differences. It is more likely that it is long-standing differences in Swiss policy-settings and institutions that have created the favourable conditions for saving, if not the reluctance in recent years to engage in investment. So long as these settings are deemed appropriate once carefully examined, then there is no *separate* reason to change policy or to take specific measures to bring the current surplus down. If it declines because policy improvements generate faster trend growth, which stimulates both investment and imports, then that is all well and good. Yet it must be recognised that the potential to achieve lasting changes in external balances through structural reforms is probably fairly limited (Kennedy and Sløk, 2005).

One angle that justifies explicit thinking about the surplus is its role in determining the real exchange rate. A higher surplus would normally lead to a stronger currency to ensure long-run balance of payments equilibrium. But the carry trade has driven down the value of the franc, possibly to an unsustainable level.[28] If at some point Swiss holders of its huge foreign assets decide to repatriate them at a rapid pace or foreign investors choose quite suddenly to unwind their carry-trade positions – possibly because of a drop in risk appetite and increase in volatility[29] or because the SNB moves more aggressively to raise interest rates – then the franc exchange rate would appreciate and could even spike higher, as happened to the yen and the franc in the second half of 1998 and has been hinted at in recent months. This might call for quick

28. There has also probably been a reverse mechanism at work: by causing a depreciation, the carry trade has no doubt led to an increase in the size of the surplus itself, through a rise in net exports of goods and services associated with improved competitiveness and through higher net factor income.

29. For a useful, detailed look at the current state of the carry trade see Nordvig (2007). He argues that reduced global risk appetite could pose a challenge to carry-trading strategies, especially as the compensation for currency risk looks to have diminished to very unattractive levels for investments in G10 currencies, though not for those of emerging markets.

action on the part of the monetary authorities to stabilise the economy, since such a shock would have important deflationary consequences. But the implications for some sectors could be serious, even if contractionary aggregate consequences were avoided. Blanchard (2007) has recently argued in a different context that, after several years of depressed output, producers of non-tradeables might have permanently lower productivity through hysteresis effects and might also lack the wherewithal (financial and other) to expand in response to the price signals. That might be taken as a justification for some redirected budgetary spending to non-tradeables sectors and to investment in particular.

Assuming the new, higher level of the franc was fairly rapidly seen as quasi-permanent, then the resulting drop in the demand for exports and import-competing goods and services would lead to pressures for restructuring. It is therefore crucial – so as to be as well prepared for such an outcome as possible – that Swiss markets be flexible and that factors be mobile both geographically and sectorally. Fortunately, available evidence points to a very high degree of economic resilience due to well developed and flexible financial markets and a moderate degree of labour- and product-market regulation (Duval *et al.*, 2007). Specific policy implications are as follows:

- In terms of labour markets, that implies: *first*, that employee protection rules and legislation be designed – as is the case – with a view to assisting individuals and not protecting jobs; *second*, that stamp duties on housing transactions not act as a barrier to the sale of a home that is necessitated by a shift in the owner's employment; *third*, that cantonal occupational licensing requirements be suppressed in favour of a mutual recognition/single passport approach; *fourth*, that immigration be recognised as especially valuable, since immigrants are more mobile within the country and admission is sensitive to the need for specific skills; and, *finally*, that added focus be placed on training and general (as opposed to firm-specific) skills in this context of shifting economic needs.

- As to capital markets, policies should focus on encouraging financial-market participants to boost their funding of start-ups and other youthful firms, since it is through such entities that inter-sectoral shifts proceed the most smoothly. Similarly, bankruptcy customs and law should not be designed so as to hold resources in sectors exposed to negative long-term structural shifts.[30] In addition, tax and corporate governance rules should likewise not discourage exit or redeployment: in that regard the classical treatment of dividends in the tax law probably acts to hold resources within firms and thus, at the margin, within existing industries. Bringing in a ceiling on the tax deductibility of second-pillar saving (to the lowest statutory rate) might help to treat saving in low-risk assets in a less favourable fashion. But the temptation to use tax policy to directly stimulate investment should be resisted, especially if the support were aimed squarely at housing, where many OECD countries are overly generous.

- In product markets it is crucial for firms to be able to enter new markets, and hence the competition authorities must be vigilant to the creation or maintenance of artificial barriers to entry by incumbents, which can significantly restrict investment (Alesina *et al*., 2003*)*. In regulated sectors, especially network industries, sectoral regulators must also keep a watchful eye. Policies that hold output in a given sector, such as inheritance rules applied to farmers or the aforementioned double taxation of dividends, are especially harmful.

30. The authorities hope to reform the bankruptcy law during the next legislature.

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