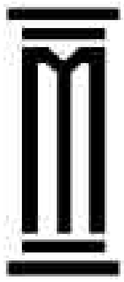

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CAPITAL ACCESS INDEX

GOVERNANCE AND GROWTH: THE EUROPEAN CHALLENGE

April 2003

Number 35

James Barth, Donald McCarthy, Triphon Phumiwasana, Susanne Trimbath and Glenn Yago

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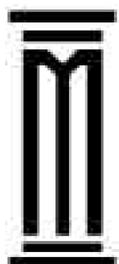

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Executive Summary

One year after a relatively upbeat assessment of the global trend to more open capital markets, the 2003 Capital Access Index (CAI) finds the world a more difficult place, with about as many countries scoring higher (42) as lower (39) than their ranking in 2002. Hong Kong, the United Kingdom and the United States remain numbers one, two and three in the ranking.

The deterioration of the world economy, instability in the overall financial sector and added uncertainty brought on by the threat of war and terrorism, adversely affected access to capital across the globe. A multi-year downturn in financing deeply affected many developing countries.

The most striking change from last year's Capital Access Index is the dramatic decrease in Argentina's score – dropping 23 places, from 45th in 2002 to 68th this year, out of 89 countries. The end of the policy of convertibility and the default on government debt fueled a collapse in Argentine credit markets. Argentine product markets suffered from the resulting sharp increase in inflation. Similarly, the peso fell sharply as interest rates skyrocketed. Uruguay's score also showed a precipitous decline as the "contagion effect" exploded across their banking sector.

The focus of this year's Index, however, is Europe. The combined GDP of Europe is the second largest in the world – more than 30 percent of the world's economy – nearly exceeding that of the U.S. Nine of the members of the EU are ranked in the top 20 countries for capital access. Despite efforts to encourage markets and market efficiency in Europe, problems persist in the development of market-based solutions for access to capital. As with most multinational issues, there is no "one-size-fits-all" solution to the problem. Except for the countries that are candidates to join the EU – which have benefited from the receipt of capital that might otherwise have gone to Latin America and parts of Asia – equity and bond market infrastructure is an unlikely deterrent to development in most EU countries. The task ahead for member countries is to find other ways to cut investor costs and to raise market efficiency.

The Milken Institute Capital Access Index (CAI) scores the ability of entrepreneurs to gain access to financial capital in countries around the world. The term "entrepreneur" is broadly construed to include innovators, managers and owners in need of capital to start a new enterprise, expand a promising line of business, finance ownership change, or restructure a large multi-industry firm. The CAI measures not only the breadth, depth and vitality of capital markets, but also the ability to gain access without discrimination. Thus, it also measures global progress in the democratization of capital. This year, three Middle Eastern nations were added, giving the CAI added depth in a previously underrepresented and increasingly important region. A total of 89 countries are in this year's ranking.

Capital Access and the Enlargement of the EU

The Milken Institute has identified several key challenges to Europe's capacity to finance its future:

- Labor market rigidities that make job creation difficult and keep unemployment high by international standards. Since its inception, the EU has lagged behind the U.S. in economic growth, productivity and job creation (average rate of real GDP growth of 3.3 percent over the past decade compared to 2.1 percent in Europe, and down to 1.1 percent last year);
- Negative demographic trends that will require the EU to undertake large fiscal adjustments or accept growing deficits and debt levels. The fiscal ramifications of demographic challenges are pressing: for each person aged 65 or older, there are currently four people of working age (15-63) falling to less than three by 2025 and 2.1 by 2050. By 2015, aging populations will cost the EU an estimated 1 percent of GDP in extra spending rising to 4.8 percent by 2030 and 6.3 percent by 2040. Declining tax bases, coupled with rising health and pension liabilities are expected to reach unsustainable levels;
- The accession of ten countries (including eight transition countries) to the EU over the next 18 months will produce the largest economic union in the world and is fraught with financial challenges;
- Public finance trends threaten the Stability Growth Pact (SGP) that underlies the monetary union. Germany's deficit already violates the SGP and France is not far behind, having signaled that its spending will not be bound by the SGP. Public debt exceeds the allowed share of GDP in five Euro area countries with another two close to the threshold.
- Structural reform of pension systems to allow for greater private provision for retirement and a greater role for individual savings, capital market reform, labor retention policies for older works, fiscal reform, and immigration are all necessary to sustain growth;
- Positive capital market developments can increase financing capability – the development of the corporate bond market represents a 20 percent average annual

growth rate for the first three years of the Euro. Firm valuations have grown 8 percent faster in the twelve Euro area countries than in those outside the EU. Euro area firms had higher investment rates after 1998. There are positive cross-country correlations between the quality of legal systems and capital market institutional development and expected return on equity. Poor shareholder protections are penalized with lower equity valuations. In general, corporate governance, structures, and enforcement have positive effects upon market size, liquidity, returns and real economy changes in productivity and job creation.

- Europe is currently at the same stage of corporate restructuring that the U.S. reached in the mid- to late-1980s and most industry analysts believe that Europe has a further three to five years of restructuring ahead of it throughout every sector. Recent activity in the European market for corporate control has equaled or exceeded that of the U.S.

Table 1: 2003 Capital Access Index

Country*	2003 Score	2003 Rank	2002 Score	2002 Rank	Change in Score	Change in Rank**
Hong Kong	5.74	1	5.65	1	0.09	0
United Kingdom	5.63	2	5.59	2	0.04	0
United States	5.55	3	5.50	3	0.05	0
Singapore	5.50	4	5.43	4	0.07	0
Netherlands	5.48	5	5.35	6	0.13	1
Switzerland	5.40	6	5.38	5	0.02	-1
Canada	5.25	7	5.22	7	0.03	0
Luxembourg	5.20	8	5.16	8	0.04	0
New Zealand	5.19	9	5.16	8	0.03	-1
Denmark	5.12	10	4.94	15	0.18	5
Ireland	5.12	10	4.98	13	0.14	3
Australia	5.12	10	5.00	10	0.12	0
Germany	5.02	13	4.96	14	0.06	1
Finland	5.02	13	5.00	10	0.02	-3
Spain	4.94	15	4.78	18	0.16	3
Sweden	4.92	16	4.84	17	0.08	1
Taiwan	4.88	17	5.00	10	-0.12	-7
South Korea	4.83	18	4.78	18	0.05	0
Japan	4.78	19	4.88	16	-0.10	-3
Israel	4.77	20	4.71	21	0.06	1
France	4.72	21	4.66	24	0.06	3
Austria	4.69	22	4.65	25	0.04	3
Belgium	4.69	22	4.76	20	-0.07	-2
Iceland	4.67	24	4.71	21	-0.04	-3
Kuwait	4.67	24	n/a	n/a	n/a	n/a
Bahrain	4.66	26	n/a	n/a	n/a	n/a
Portugal	4.62	27	4.70	23	-0.08	-4
Malaysia	4.60	28	4.56	28	0.04	0
Chile	4.58	29	4.53	29	0.05	0
Norway	4.56	30	4.57	27	-0.01	-3
South Africa	4.50	31	4.62	26	-0.12	-5
Italy	4.35	32	4.45	30	-0.10	-2
Hungary	4.35	32	4.21	33	0.14	1
Barbados	4.30	34	n/a	n/a	n/a	n/a
Greece	4.28	35	3.96	47	0.32	12

[*] "Country" in this report does not always refer to a territorial entity that is a state as understood by law and practice; the term also covers nonsovereign territorial entity, for which data are provided on a separate basis.
[**] Because 14 countries were dropped and five were added this year, changes in rank may reflect some movement that occurred solely due to these modifications.

	2003		2002		Change in	
Country*	Score	Rank	Score	Rank	Score	Rank**
Thailand	4.26	36	4.37	31	-0.11	-5
Lebanon	4.26	36	n/a	n/a	n/a	n/a
China	4.18	38	4.18	35	0.00	-3
Panama	4.18	38	4.19	34	-0.01	-4
Estonia	4.17	40	4.17	36	0.00	-4
Poland	4.14	41	4.12	38	0.02	-3
Jordan	4.14	41	4.24	32	-0.10	-9
Tunisia	4.12	43	4.09	40	0.03	-3
Slovenia	4.07	44	4.17	36	-0.10	-8
Czech Republic	4.02	45	4.06	42	-0.04	-3
Slovak Republic	4.02	45	3.83	53	0.19	8
Trinidad & Tobago	4.00	47	4.08	41	-0.08	-6
Egypt	3.98	48	4.06	42	-0.08	-6
Croatia	3.97	49	3.95	49	0.02	0
Morocco	3.95	50	3.97	46	-0.02	-4
Mauritius	3.90	51	4.05	44	-0.15	-7
Lithuania	3.85	52	3.70	59	0.15	7
Latvia	3.84	53	3.76	55	0.08	2
Peru	3.84	53	3.94	50	-0.10	-3
Philippines	3.80	55	3.96	47	-0.16	-8
Honduras	3.78	56	3.65	64	0.13	8
Nicaragua	3.75	57	3.88	52	-0.13	-5
India	3.71	58	3.68	62	0.03	4
Mexico	3.69	59	3.65	64	0.04	5
Vietnam	3.67	60	n/a	n/a	n/a	n/a
Indonesia	3.64	61	3.50	75	0.14	14
Nigeria	3.63	62	3.74	57	-0.11	-5
Bolivia	3.62	63	3.61	67	0.01	4
Pakistan	3.56	64	3.56	70	0.00	6
Dominican Republic	3.55	65	3.61	67	-0.06	2
Bulgaria	3.53	66	3.40	81	0.13	15
El Salvador	3.53	66	3.80	54	-0.27	-12
Argentina	3.52	68	4.02	45	-0.50	-23
Ivory Coast	3.52	68	3.36	83	0.16	15
Bangladesh	3.52	68	3.54	74	-0.02	6
Brazil	3.48	71	3.59	69	-0.11	-2
Turkey	3.48	71	3.33	85	0.15	14
Guatemala	3.46	73	3.56	70	-0.10	-3
Sri Lanka	3.46	73	3.69	61	-0.23	-12
Moldova	3.43	75	3.74	57	-0.31	-18
Jamaica	3.42	76	3.50	75	-0.08	-1
Kenya	3.37	77	3.46	80	-0.09	3

	2003		2002		Change in	
Country*	Score	Rank	Score	Rank	Score	Rank**
Costa Rica	3.37	77	3.39	82	-0.02	5
Colombia	3.33	79	3.35	84	-0.02	5
Saudi Arabia	3.32	80	3.48	77	-0.16	-3
Uruguay	3.20	81	3.55	72	-0.35	-9
Romania	3.14	82	3.48	77	-0.34	-5
Ecuador	3.10	83	3.05	88	0.05	5
Venezuela	2.96	84	3.17	87	-0.21	3
Ukraine	2.88	85	2.83	92	0.05	7
Russia	2.82	86	2.74	93	0.08	7
Paraguay	2.81	87	3.00	89	-0.19	2
Ghana	2.70	88	2.68	94	0.02	6
Zimbabwe	2.69	89	2.89	91	-0.20	2

I. Introduction

The Milken Institute Capital Access Index (CAI) ranks countries by the ability of its entrepreneurs to gain access to capital. The five components of the CAI are general economic environment, bank lending, capital market development, international environment and sovereign ratings.

The **general economic environment** creates the conditions for entrepreneurial activity. Macroeconomic measures reflect important variables relating to inflation, interest rates, and fiscal policy (Fry, 1995). Institutional measures reflect the fact that where legal contracts are not enforced, or either private or government agents can expropriate assets or earnings with no recourse, capital access is constrained.[2] Given the basic condition of a sound macroeconomic and institutional setting, the next important aspect of capital access is the ease of securing **bank lending**. The CAI poses a number of questions. In what countries are banks free to lend to projects of their choice that are likely to yield high returns? What countries have competitive banking markets? Where are banks dominated by repressive policies or outright state ownership? Is the banking sector stunted or robust?

Then next component of capital access is **capital market development**. Equity and debt are vital sources of start-up and later-stage external finance, and can facilitate the restructuring of entire industries. Securitization and other more sophisticated instruments of finance are included in our measure of advanced capital market development. In many countries, where such instruments and markets are underdeveloped, they do not serve the interests of entrepreneurs in need of capital.

The **international environment** gauges entrepreneurs' ability to access international capital**,** an additional source of funds for entrepreneurs and active capital market participants, though poor **sovereign credit ratings** are a significant barrier to capital access. While these ratings are based in large part on measures already included, we

[2] This perspective has been highly influenced by North (1981 and 1990).

consider them on the premise that the various rating agencies bring additional expertise and knowledge of these markets to bear in assessing country ratings. We use sovereign credit ratings by Moody's and Standard and Poor's.

II. Converging vs. Diverging European Markets: Implications for an Expanded European Union

Four years ago, at the onset of the introduction of the Euro, we reviewed the structural and institutional factors that were constraining and shaping the development of the nascent Euro area and the broader European Union (EU) (Yago, 1998). Besides assessing the broad changes in European markets and capital access by firms, this essay deals with an important junction that the EU will face over the next year and a half. The accession of ten countries, including eight transition countries, to the EU will produce the world's largest economic union and in the process will present it with new challenges. Enlargement will transform and restructure Europe in many ways far beyond the initial "old" European group that proceeded the EU in the 1950s (**Table 2**).

Table 2: Old and New Europe: The EU and the Accession Countries

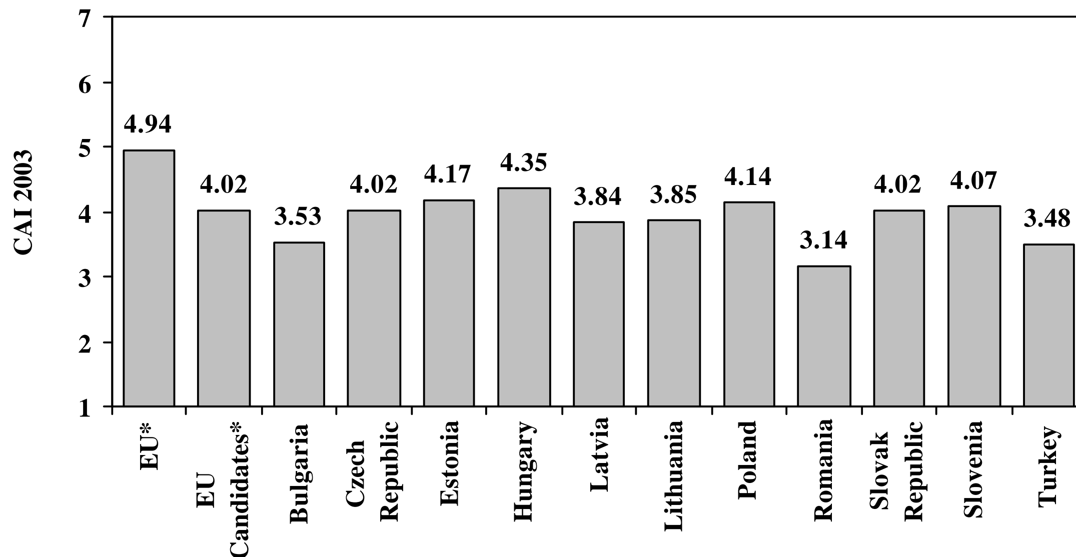
European Union	Accession Countries
Austria, Belgium, Denmark*, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden*, U.K.*	Bulgaria**, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania**, Slovak Republic, Slovenia, Turkey**

* indicates non-Euro area countries
** indicates countries that have yet to conclude accession negotiations
Source: European Commission,

Both "old" and "new" European members of the EU face common challenges of not only structural and institutional inefficiencies but also weak economic fundamentals. Challenges concerning financial institutions, corporate finance and capital markets that are captured by our CAI combined with demographic and public finance issues create considerable concerns about the future prosperity of an enlarged EU. Inflexible labor markets, "moral hazard," corporate intransigence, management entrenchment, public

finance trends that threaten the integrity of the Stability and Growth Pact (SGP) and unfavorable demographic trends are all problems that the EU must overcome.
The EU is still characterized by high public sector debt and labor laws that make job creation difficult and costly, not to mention operating cost reductions almost impossible. In addition, it faces deteriorating bank asset quality and operating earnings that, in turn, curtail credit availability, growing unfunded private and public pension liabilities and an aging workforce. Moral hazard is another concern as evidenced by government bailouts in corporate and banking sectors that delay structural reform. Lack of transparency and minority shareholder rights are also important challenges. **Figure 1** shows that the Capital Access Index scores of the accession countries are still below the median index of EU counties.

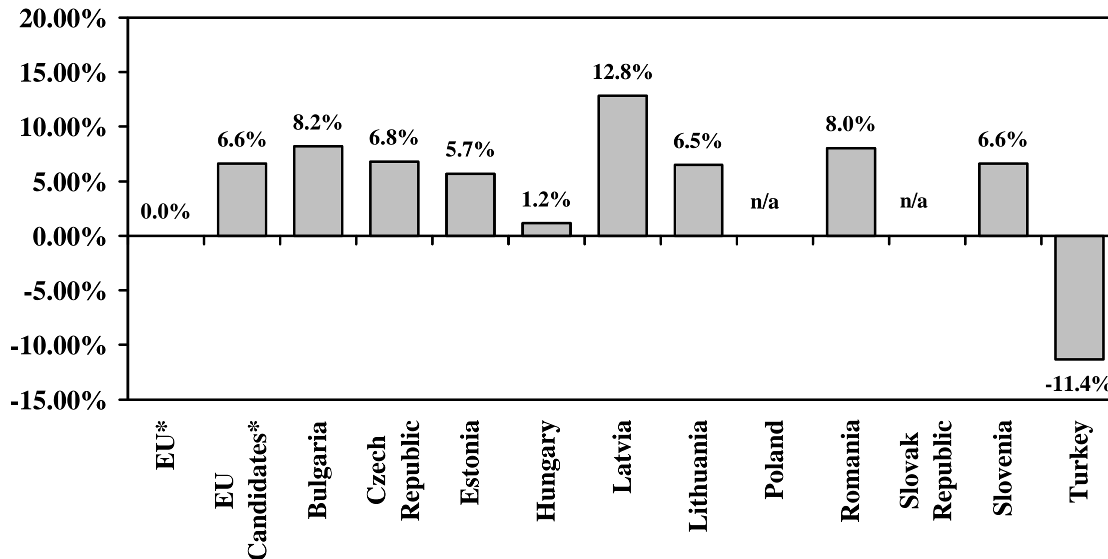
Figure 1: 2003 Capital Access Index: The EU and the Accession Countries



* EU and EU candidate country scores are the median of the group.
Source: Milken Institute

Although access to capital remains below the EU in the accession countries, there were net outflows of capital from the EU in 2001, while the accession countries enjoyed net inflows (**Figure 2**).

Figure 2: 2001 Net Capital Flows: The EU and the Accession Countries

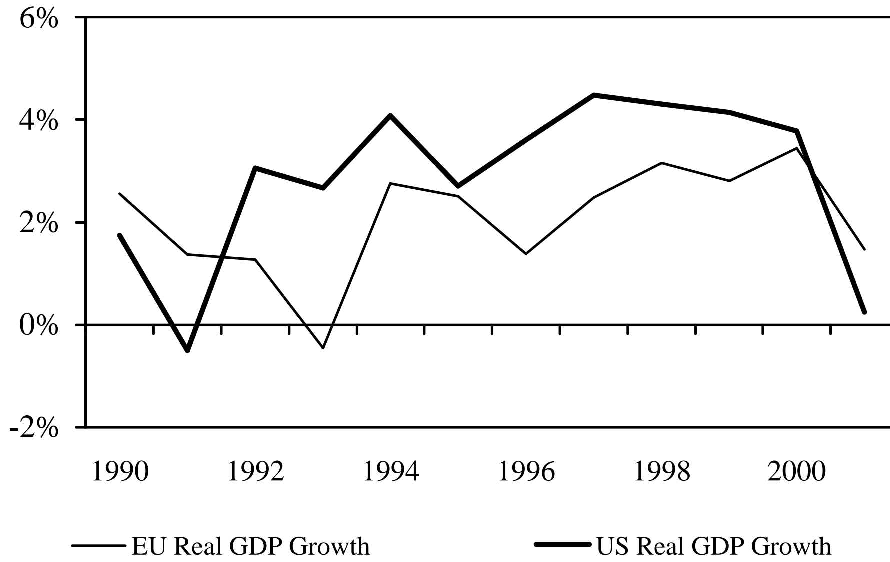


* EU and EU candidate country scores are the median of the group.
Source: International Financial Statistics

A. Europe's Labor Market Challenge

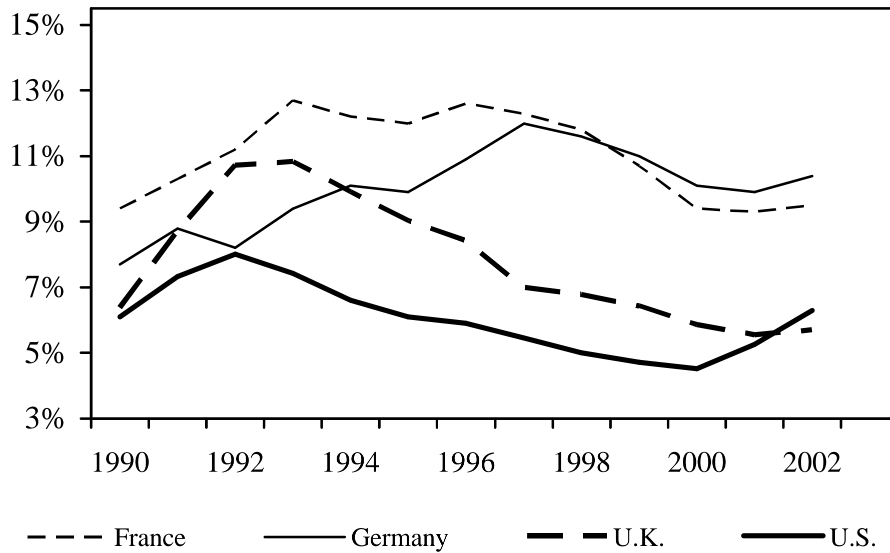
Since its inception, the EU has tended to lag behind the U.S. in economic growth, productivity and job creation. Convergence remains illusive. Over the past decade the average rate of real GDP growth in the U.S. was 3.3 percent while the average growth rate in the EU was just 2.1 percent (**Figure 3**). Similarly, unemployment has remained considerably higher in the EU than in the U.S. (**Figure 4**)

Figure 3: Real GDP Growth in the EU and U.S.



Source: Organization for Economic Cooperation and Development

Figure 4: Unemployment in the U.S. and Selected EU Countries

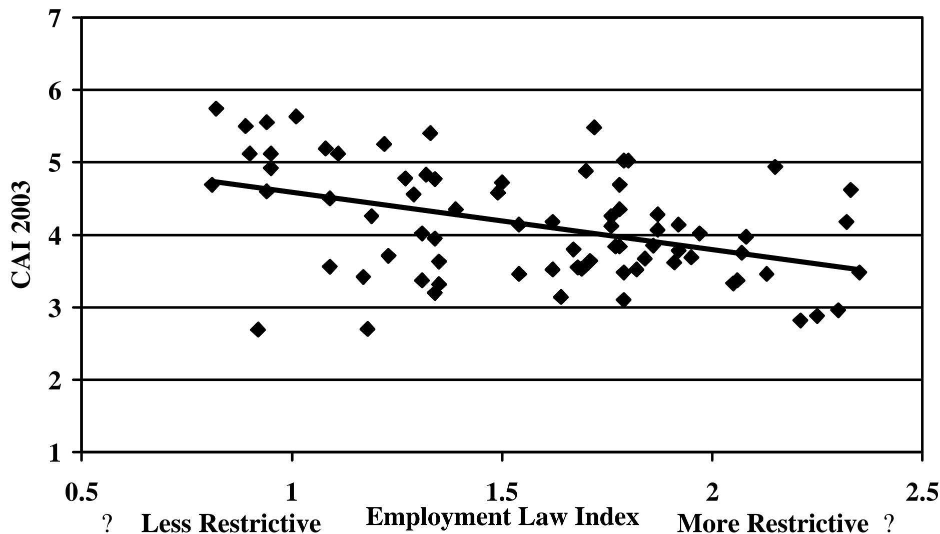


Source: Organization for Economic Cooperation and Development

Chief amongst the factors leading to sluggish EU growth and job creation is the pervasiveness of restrictive labor practices. The EU has long prized its "social model,"

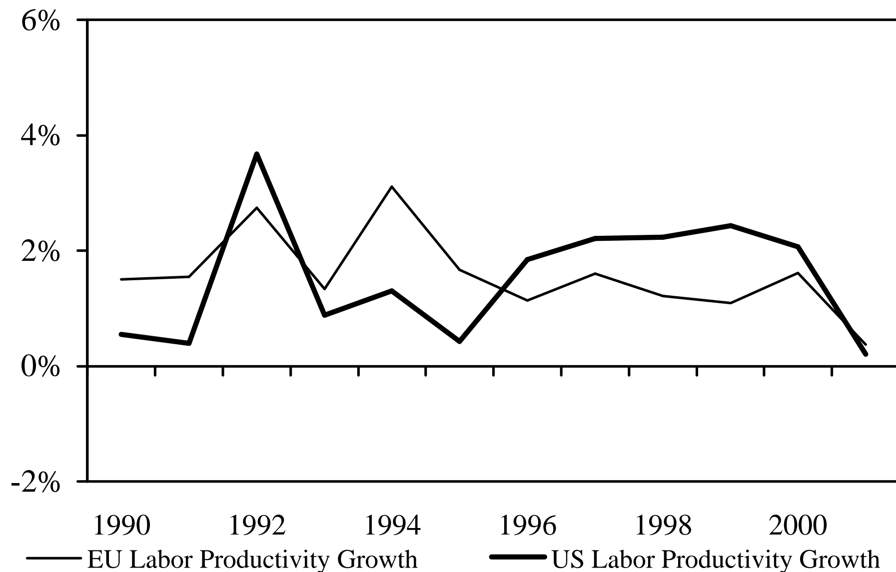
which seeks to shield Europeans from the supposed harshness of the market economy through strong labor unions, restrictive employment laws and generous state benefits. However, this makes it difficult or prohibitively costly for employers to shed workers during downturns in the business cycle so firms are reluctant to create new jobs during upturns. Additionally, countries with highly restrictive labor practices tend to score lower with respect to capital access (**Figure 5**). A traditional justification for the "social model" is that workers in the EU, while well paid and protected, are highly productive. If, however, the "social model" is dependent for its success on high productivity growth rates, the outlook is grim as EU workers' productivity grew more slowly than that of their U.S. counterparts for most of the last decade (**Figure 6**).

Figure 5: The Relationship Between Restrictive Labor Laws and the CAI



Source: Milken Institute, and World Bank

Figure 6: Labor Productivity Growth in the EU and U.S.



Source: Organization for Economic Cooperation and Development

B. Europe's Demographic Challenge

Issues of structural and institutional reform converge with unfavorable demographics to create a unique set of problems that may lead to an increase in overall risk – especially sovereign credit risk – in European markets. Europe has a rapidly aging population and the demographic balance that allowed for the generous intergenerational redistribution that categorizes EU social security systems will soon no longer exist. An aging population requires fiscal, corporate finance and financial institutional reforms to address the problems arising from the resulting generational rebalancing. Europe has been slow to recognize these problems with the result that downward ratings put pressure on sovereign credits and an adverse impact on corporate cost of capital. These developments are real threats for slower growth.

The fiscal ramifications of demographic developments in the EU are most pressing. For each person aged 65 or older, there are currently four people of working age (15-64) in Europe. The forecast is that this ratio will fall to less than three by 2025 and to 2.1 by 2050. By 2015, aging populations will cost the EU an estimated 1 percent of GDP in

extra spending and then is expected to rise to 4.8 percent by 2030 and 6.3 percent by 2040 (**Table 3**). Declining tax bases, coupled with rising health and pension liabilities are expected to reach enormous levels (**Table 4**) and, if unchecked, will lead to massive increases in deficits and debts.

Table 3: Additional Age-Related in public spending in the EU 2005-2050

% of GDP	2005	2010	2015	2020	2030	2040	2050
Total additional age-related spending	0.0	0.1	1.0	2.0	4.8	6.3	6.1
Of which pensions	0.2	0.4	1.1	1.8	3.3	4.1	3.9
Of which health	0.0	0.1	0.3	0.6	1.1	1.5	1.6
Of which long-term care	0.1	0.1	0.2	0.4	0.8	1.2	1.3
Of which education	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	-0.2
Of which child benefits	-0.2	-0.3	-0.4	-0.3	-0.3	-0.4	-0.4

Source: Standard and Poor's

Table 4: Estimated change in deficits and debt 2002-2050

	Deficit (% of GDP)		Public Debt (% of GDP)	
	2002	***2050***	**2002**	***2050***
Austria	-1.3	*-13.0*	63	*216*
France	-2.8	*-16.0*	59	*273*
Germany	-3.8	*-17.0*	61	*239*
Greece	-1.1	*-15.0*	105	*141*
Netherlands	-0.7	*-11.0*	52	*133*
Portugal	-2.8	*-15.0*	60	*254*
Spain	0.2	*-14.0*	55	*137*

Source: Standard and Poor's, Bank of Austria, Bank of France

Additional age-related spending is estimated to be roughly 78 percent of EU GDP for the 2025-2050 period (Kraemer and Marchand, 2002). To put this in perspective, this would be nearly twice as much as the estimated total cost of German re-unification. Looming intergenerational imbalances could seriously undermine the fiscal discipline that underlies price stability in the Euro area. Already, Germany's deficit breaches the SGP, and the new French government, which is close to a similar situation, has signaled that it considers itself not bound by the SGP in its spending decisions (**Table 5**). Worse yet, public debt exceeds the allowed ratio to GDP in five Euro area countries with another two close to the threshold (**Table 6**).

Table 5: Public Deficits

	Deficit as % of GDP
Germany	-3.8
GSP threshold	-3.0
France	-2.8
Portugal	-2.8
Euro Area	-2.2
Italy	-2.1
United Kingdom*	-1.8
Austria	-1.3
Greece	-1.1
Netherlands	-0.7
Ireland	-0.3
Luxembourg	-0.3
Belgium	0.0
Spain	0.2
Finland	3.8
United States*	*-3.1*

* indicates noneuro area country
Source: Bank of France, Bank of Austria

Table 6: Public Debt

	Debt as % of GDP
Italy	109.4
Belgium	106.1
Greece	105.3
Euro Area	69.2
Austria	63.1
Germany	61.0
GSP threshold	60.0
Portugal	59.8
France	58.7
Spain	55.2
Netherlands	51.9
Finland	42.5
United Kingdom*	37.9
Ireland	34.1
Luxembourg	5.1
United States*	*60.7*

* indicates noneuro area country
Source: Bank of France, Bank of Austria

Nor are demographic problems limited to the public sector. Recently, Standard and Poor's put the ratings of 10 European companies on negative credit watch following a

review of unfunded pension liabilities of 500 European companies. Structural reform of pension systems to allow for greater private provision for retirement and a greater role for individual savings, shifts in labor market policy to retain older workers, fiscal reforms and immigration are all parts of potential solutions, but each potential solution brings with it enormous political problems.

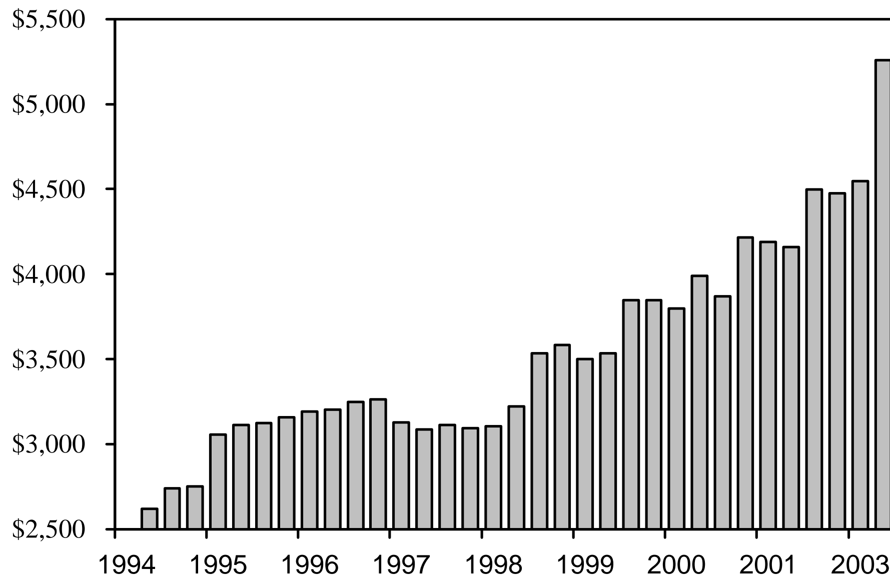
C. Lessons Learned from Accession: What has worked in the EMU?

The creation of the euro was the most significant institutional change in global financial markets since the end of Bretton Woods and its dollar-gold standard. Despite all the challenges ahead, the lessons learned so far about efforts to reform and empower markets to address growth are instructive. To summarize, the main benefits that have emerged to date also can be built upon and expanded to assist in broadening the base of the EU in a constructive manner.

The introduction of the euro lowered firms' cost of capital by exporting the anti-inflationary reputation of the German Bundesbank to high inflation countries, increasing capital market integration and eliminating currency risk among the member countries.[3] Firms' performance improved through their new ability to create more varied capital structures and thus lower their cost of capital. This development occurred with the growth of euro-denominated corporate debt issuance (De Bondt, 2002). Debt securities amounted to only 3 percent of total corporate liabilities in the EU at the end of 1999 compared to 10 percent in the U. S. and Japan. By 2002, debt securities amounted to 7 percent of total liabilities for EU non-financial corporations, representing an average annual growth rate of about 20 percent for the first three years of the euro (**Figure 7**).

[3]See Bris, et. al., 2002; Santos and Tsatsaronis, 2002; Hardouvelis, et.al, 2002; and Fratzscher, 2001.

Figure 7: Euro Area Corporate Bonds and Notes Outstanding (in billions)



Source: Bank for International Settlements

Firm valuations improved, growing 8 percent faster in the twelve euro area countries than in countries outside the area. Also, euro-area firms had higher investment rates after 1998.

The causal link between financial development and economic growth appears quite strong based upon the empirical literature and is corroborated by post-Euro launch events.[4] Moreover, the link between firms and entrepreneurs accessing capital and economic growth is particularly relevant to the EU's expansion. The growth of corporate debt securities and capital markets reduces the overall volatility in the ability of firms to access credit and provides an alternative source of external finance to conventional bank-based financing. The need to allow for funds to flow from declining corporate sectors to growing ones is enhanced by corporate equity and debt markets. This is particularly important to the EU with its continued reliance on traditional manufacturing. Finally, the growth of a capital market-based system provides the market discipline that enhances

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[4] See Stulz, 2000; Wurgler, 2000; and Rousseau and Sylla, 2001.

transparency and creates markets for corporate reorganization, liquidation and control.[5] Ultimately, by reducing capital costs and improving efficiency, the presence of developed capital markets and well-functioning financial institutions, and the deployment of financial technologies, increases total factor productivity and thus economic growth (Beck et al, 2002).

By providing a wider scope of financing sources, the potential for further growth can be better achieved through capital markets. Reducing dependency on banking financing and enabling a greater spectrum of financial resources to be developed are all methods to promote the financing of greater economic development.

III. Promoting Access to Capital through Corporate Governance

A. Good Governance Enhances Capital Access

The volatility in emerging and established capital markets over the past year reflects a growing recognition of the importance of institutional and market-based mechanisms that govern corporations. Corporate governance reflects the economic dimension of governance in civil society and the capacity for firms and individuals to freely engage in productive activities and thereby create economic opportunities. The Asian Crisis and the Russian Crisis, the charges of crony capitalism that have rocked emerging markets, and the corporate scandals of the past year in the U.S. have created common themes of improving transparency and greater accountability that resound in debates about appropriate business and public policies.

Among the many dimensions of the CAI, those relating to transparency and corporate governance are clearly central. Building upon the data and research at the Milken Institute, we have focused heavily upon themes of corporate governance and transparency and, more specifically, how they impact corporate performance and economic outcomes in the countries throughout the world.

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[5] See Davis, 2001 and Rajan and Zingales, 1998.

That the development of the financial sector is crucial to stable economic growth is hard to dispute. However, the potential for the financial sector to maximize the opportunities for growth is dependent on how corporations are governed and the relationships between all parties in financial transactions. There is an increasing appreciation that these institutional arrangements can impede or retard entrepreneurial opportunities and their realization. Research in this area provides many useful lessons for enabling the EU to achieve the growth rates that are necessary to overcome the daunting challenges of the decades ahead.

To the extent that the EU's current corporate governance remains deficient, there is an opportunity for accession countries to rapidly improve their governance by adopting best practices and, in fact, bypass countries like France and Germany in the quality of their governance. Investors are increasingly concerned about governance, as evidenced by recent poll by McKinsey suggesting that 56 percent of investors in Western Europe, 57 percent in North America and 85 percent in Eastern Europe consider corporate governance to be equally as important as financial fundamentals (McKinsey, 2002). This means that corporate governance reforms are a key challenge to accession countries.

Box 1: Corporate Governance in Selected Accession Countries

The Czech Republic

The Czech Republic was an early reformer amongst the transition countries in that it pursued liberalization policies more aggressively than some of its neighbors. However, its rapid privatization program, which made use of a voucher system, resulted in highly concentrated ownership and led to corporate governance abuses. As in Russia, voucher-led privatization resulted in insiders making negative net present value investments and thereby transferring value from the overall firm to themselves. Concentrated ownership combined with a culture of regulatory forbearance and weak supervision has led to weak corporate governance in the Czech Republic.

The Czech Republic recently took steps toward improving governance, with many of these improvements spurred by the country's application for EU membership. The legal responsibilities of insiders have been defined, a new fairly unrestricted mergers and acquisition regime has been instituted, and accounting standards have been strengthened. Publicly listed firms are

now more in accordance with International Accounting Standards as are the Czech Republic's standards for disclosure by listed companies. In addition to the accounting reforms, shareholder rights have been improved. But creditor rights remain weak despite the amendments to the Bankruptcy Law that were introduced in 2000.

Hungary
Reforms to Hungary's corporate governance have been motivated in large part by its accession to the EU. Hungary's accounting practices are of relatively high quality and foreign firms operating in Hungary and Hungarian cross national firms are required to meet International Accounting Standards. Shareholder rights are also fairly well-established, with shareholders being allowed to institute civil actions against management and directors.

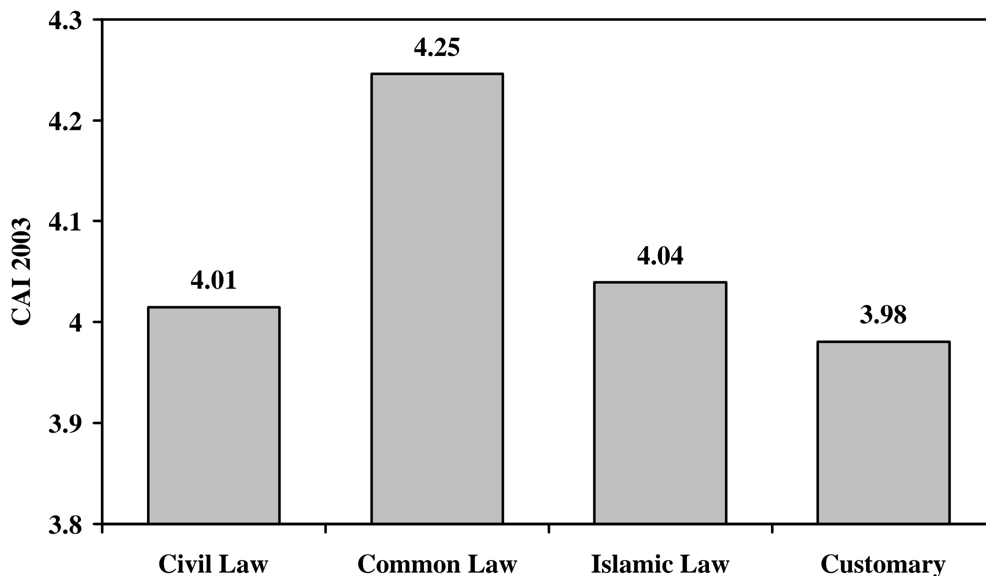
Hungary also has a liberal takeover regime with merger and acquisition activity reasonably unrestricted, which provides an important discipline to management. A key weakness in Hungarian corporate governance, however, is creditor rights. The development of a corporate bond market is hampered by the lack of firm legal foundations for secured debt. Secured creditors are not ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm in Hungary.

Poland
Poland has adopted a more gradualist approach to market reforms but nonetheless has made progress toward liberalization sufficient to conclude negotiations for accession to the EU. Shareholder rights are fairly well-developed, with the Commercial Code setting out the fundamental rights of shareholders, including the right to vote at general meetings, preemptive rights and the right to vote on merger proposals, debt issuance, and amendments of the company's articles of association.
Accounting standards remain weak in Poland, however, as companies listed on the Warsaw Stock Exchange are not required to meet International Accounting Standards. Instead, they are only required to meet the standards of Polish GAAP. Yet, in practice, firms often exceed the modest listing requirements with respect to accounting and disclosure. Another weakness in Polish corporate governance lies in its lack of an efficient market for corporate control. Merger and acquisition activity has not been liberalized in Poland and there are no clear and disclosed rules or procedures for takeovers resulting in a situation where managers are able to shield themselves from accountability.

B. Fundamental Differences in Governance

In a broad sense, corporate governance is simply a way to deal with the principal-agent problem. Principals are shareholders, while agents are management and other intermediaries. Through checks and balances, corporate governance aligns the objectives of agents with those of the principals. This process increases the likelihood that the suppliers of finance to corporations will receive the expected return on their investment. Corporate governance varies considerably among nations and is based to a large degree on the historical origins of the legal systems and institutions of a country. A broad distinction can be drawn between English common law systems, those of a civil law system, those of a customary law system and those of an Islamic law or Sharia system. As seen in **Figure 8**, there are differences in the CAI scores of countries with different legal systems with common law countries' entrepreneurs enjoying more access to capital. Additionally, common law systems are associated with a greater degree of external capital financing and have significantly more initial public offerings per capita than civil law systems (La Porta and López-de-Silanes, 1998).

Figure 8: Average CAI Scores and Legal Systems



Source: Milken Institute

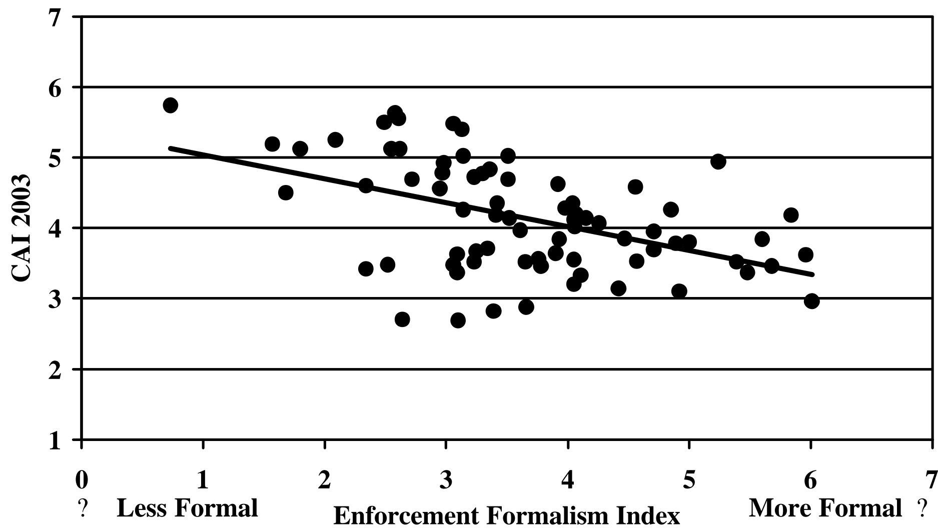
Table 7: European Financial Structures and Legal Systems

	Financial Structure (Bonds and Equities as % of Bank Assets)	Legal Systems
Austria	49	Civil Law
Belgium	83	Civil Law
Denmark*	Na	Civil Law
Finland	331	Civil Law
France	102	Civil Law
Germany	88	Civil Law
Greece	140	Civil Law
Ireland	32	Common Law
Italy	161	Civil Law
Luxembourg	n/a	Civil Law
Netherlands	111	Civil Law
Portugal	49	Civil Law
Spain	95	Civil Law
Sweden*	174	Civil Law
U.K.*	91	Common Law

Source: La Porta (1999), Milken Institute; International Financial Statistics; Merrill Lynch, Emerging Stock Market Factbook; World Bank, * indicates noneuro-area country

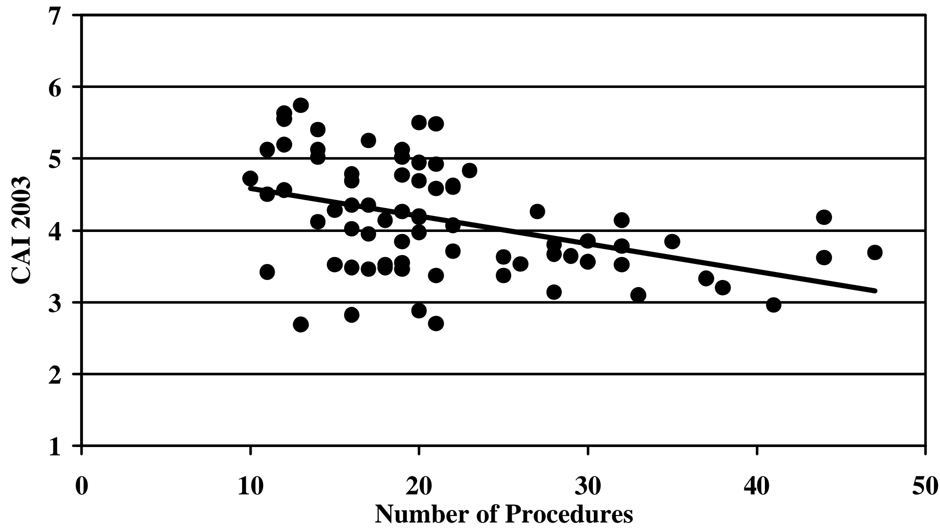
In the EU, legal systems are of common law or civil law (**Table 7**). The latter are more likely to engage in earnings management, and offer the least minority shareholder protections. As a result, equities in countries with civil law corporate governance histories tend to be valued at lower levels than equities in common law countries (La Porta, Lopez-De-Silanes, Shileifer and Vishny, 2002; Leuz, et.al, 2002; Dyck and Zingales, 2002). Corporate governances, regulatory structures, and enforcement have demonstrable impacts on market size, liquidity, returns, and ultimately upon the real economy through productivity increases and job creation (Li, 2002 and Gugler, Mueller, and Yurtoglu, 2003). This is reflected in the negative relationships between CAI scores and two measures of the degree of complexity and opacity in the rules governing contract enforcement. Countries with highly formalized rules governing contract enforcement tend to have lower CAI scores (**Figure 9**) as do countries with highly complicated rules (**Figure 10**).

Figure 9: CAI and Contract Enforcement Formalism



Source: Milken Institute and World Bank

Figure 10: CAI and Number of Procedures for Contract Enforcement



Source: Milken Institute and World Bank

Firms in countries with common law systems tend to be capital market-based and to earn returns on investment that are at least as large as their costs of capital, while countries with civil law based systems are more likely bank-based and earn average returns below their costs of capital.

In capital market-based systems – such as that of the U.S. and UK – corporate governance practices rely on strong legal protections. In countries with strong creditor and shareholder protection, creditors and investors with minority positions can be heard. Managers and CEOs are constantly under pressure to perform due to checks and balances of investors, creditors and other market forces.

Shareholder rights and creditor rights allow for risk to be spread across different types of investors. From a public corporate standpoint, diversification among the types of investors – given that investment decisions from these investors are not perfectly correlated – can reduce financing risk. From an investor's standpoint, the diversification among the type of investors may help support the value of their investments. It has recently been found that countries with poor shareholder protection are penalized with lower equity valuations (La Porta, Lopez-De-Silanes, Shileifer and Vishny, 2002).

On the other hand, bank-based systems – such as those of many continental European countries – have often put less emphasis on legal protections for minority investors. Despite the lack of protections, financial markets can still thrive. Shareholders often adapt to the lack of protection by taking controlling stakes, which in turn result in high levels of ownership concentration. This is the true because control is relatively valuable to avoid expropriation of investments.

The lack of legal protection not only gives rise to concentration of ownership, it also leads to the development of a stronger role for banks as the monitoring institutions for investors. Banks in a bank-based system are not just saving and lending institutions. Because individual investors do not have legal rights to align corporate practices to their best interests, banks are more of a corporate "watch-dog" for society. The development of better financial structures should thus not curb the development of banks, but instead should be focused on empowering minority shareholders' and creditors' rights.

C. External Forces of Governance

1. Capital Markets and Efficiency: the Mergers and Acquisition Link

There is a clear link between capital markets and corporate efficiency. Capital market inefficiencies have long been viewed as preventing large firms from being the targets of takeovers. Thus, a firm could become as inefficient as desired, so long as it was "too big to takeover" (Trimbath, 2002). When an active market for corporate control pushes firms to higher levels of efficiency – which is supported by the research of Ravenscraft and Scherer (1987) among others – then one realizes that efficient capital markets lead to efficient corporations and that inefficient capital markets allow firms to remain inefficient.

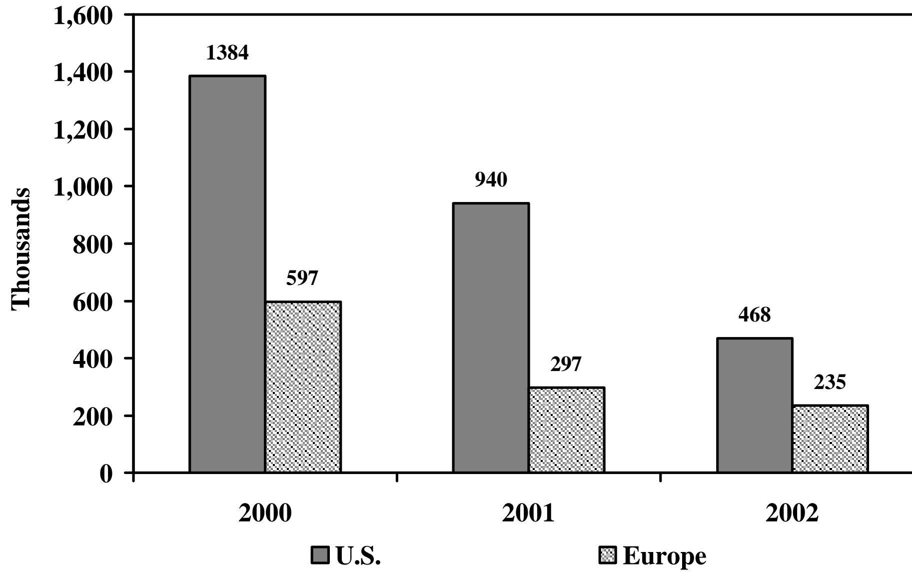
2. EU Bond Market and the Market for Corporate Control

The launch of the euro stimulated both the EU capital markets and the EU market for corporate control. Corporate mergers and acquisitions in Europe surged and Europe's debt market grew 18 percent in the first half of 1999. A completely new euro-denominated bond market emerged in a matter of months. The increased merger and acquisition activity promoted by the reduction of cross-border differences in the euro area is considered by most to be a contributing factor to the development of a market that had long existed in the U.S. but not in Europe, the high yield bond market.

Nottingham University's Centre for Management Buy-Out Research in the U.K. reported an increase in corporate control transactions in the late 1990s financed by such bonds. In 1997, there were 660 management buyouts and buy-in deals in the U.K. worth £10.4 billion, an increase by value of one-third compared to a year earlier. In addition to being a less expensive form of capital than equity or bank loans, high yield bonds also allowed companies to increase leverage by up to 70 to 80 percent of total funding, compared with 50 to 60 percent using traditional senior/mezzanine structures. The state of industry in the EU suggests that this surge in mergers and acquisitions will not be short lived. Europe is currently at the same stage of corporate restructuring that the U.S. reached in the mid- to late-1980s and most industry analysts believe that Europe has a further three to five years

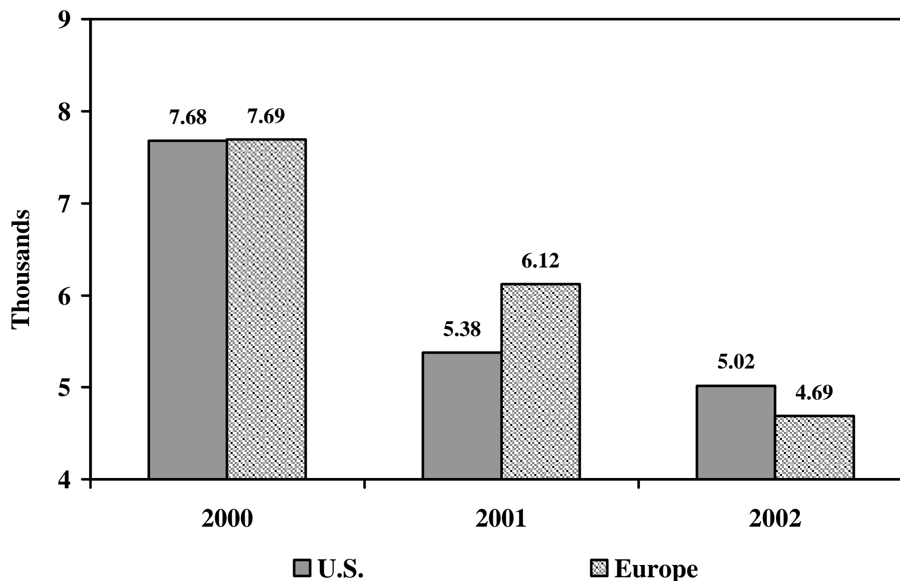
of restructuring ahead of it throughout every sector. Recent activity in the European market for corporate control has met or exceeded that of the U.S. (**Figures 11 and 12**).

Figure 11: Mergers and Acquisitions – Deal Value – Europe and U.S.



Source: Securities Data Corporation

Figure 12: Mergers and Acquisitions – Number of Deals – Europe and U.S.



Source: Securities Data Corporation

While issuance has grown in the EU, a true secondary market for bonds has failed to develop in most countries. The absence of a secondary market means a lack of liquidity which only increases risk and thereby, making debt issuance too expensive for most domestic corporations. In addition, the resulting illiquidity in domestic bond markets causes the best credits to raise funds in the international market where the cost of capital is lower, further reducing liquidity in domestic markets. This situation makes the development of deep, liquid and transparent domestic bond markets in EU economies a difficult task.

An often overlooked aspect of bond market development is the importance of a domestic demand side. Since sustained corporate bond development is contingent upon a legal system able to protect creditors – a condition not present in many EU countries – significant changes must take place in EU legal and judicial systems before investors will show substantial interest to these markets.

As the EU continues its integration, the role of the debt market has received increased attention. Historically, the banking sector has been the main provider of debt financing for local corporate entities. If local debt markets exist to channel domestic savings into domestic investment, corporations could have access to a broader set of financing sources and may be able to better weather or sustain a global liquidity crunch.

In addition to the financing patterns of EU corporations, which have historically relied on easy access to bank credit rather than the capital markets (**Table 8**), other structural impediments to the development of efficient bond markets exist in many of the countries analyzed here. Inadequate availability and quality of market makers, and underdevelopment of clearing and settlement systems, are issues that need to be addressed in order to establish healthy and robust markets for corporate debt financing.

Table 8. Size and Composition of Domestic Bond Markets

	Market Size (Billions)	Corporate	Government
U.S.	$17,091	30.3%	50.3%
Euro Area	$6,467	41.6%	48.4%
Japan	$5,305	16.1%	74.2%
U.K.	$1,082	5.1%	36.1%
Canada	$514	21.6%	69.2%
Switzerland	$262	31.4%	19.0%
Denmark	$252	69.6%	26.9%
Australia	$183	47.2%	31.3%
Sweden	$129	47.2%	46.8%
Norway	$48	46.5%	43.0%
New Zealand	$17	0.0%	64.5%
Average		**32.4%**	**46.3%**

Source: "Size & Structure of the World Bond Market: 2002", Merrill Lynch Fixed Income Strategy, April 2002

3. Challenges to EU Capital Market Development: Absence of a Harmonized Insolvency Regime

The clarity of bankruptcy rules in the U.S. underpins capital markets in general, bond markets specifically, and the high yield market in particular. The secured debt of borrowers subject to the U.S. Bankruptcy Code generally can receive ratings one to three notches above the corporation's rating (Standard and Poor's). Without clear foreknowledge of the associated risks in a security, market participants cannot accurately price their investments for borrowers. The European High Yield (EHY) market, in contrast, comprises competing bankruptcy jurisdictions, regarded by many as an impediment to development.

The question of structural and contractual subordination is emerging as a key issue in EHY market development. This is a complex legal issue that centers on the position of debt issues within the capital structure of issuers. In the U.S., bank debt and bonds are issued by the same entity within a corporate family. In the U.K., as an example of the EHY market, high yield bonds are often issued at the ultimate holding company level without benefit of security; bank debt is raised at a subsidiary level, benefiting from upstream guarantees provided through the Companies Act. Under this structure, the bond

investors cannot clearly identify the subordination in order to assess the overall asset base of the issuer in regards to the level of risk they are assuming.

Furthermore, there is no room at the European bankruptcy table for unsecured creditors (i.e., bondholders). Under U.K. bankruptcy law, the bank lenders appoint a receiver who takes charge of all the assets of the corporation – from holding company to subsidiary. The bondholders rank below the issuer for claims on the assets of the firm. This is, of course, the worst case scenario, when the bonds are issued at the ultimate holding company level. The U.K. bankruptcy procedures are generally creditor friendly, however, which should encourage a resolution to this issue that will be beneficial to the development of the high yield market.

French Bankruptcy Code, on the other hand, is much less friendly to bondholders. The French insolvency process makes it difficult for creditors to access the economic value of secured property in a reasonable time frame. If a company does not liquidate after declaring insolvency, an observation period of up to 20 months can ensue during which no debt can be paid, *irrespective of the contractual agreement for that debt*.[6] This complete disregard for bond covenants will hinder the development of the high yield market there.

The EHY market so far has not experienced a significant default event. Most observers believe that Europe will not have a fully accessible bond market until it is tested in that fashion. In 2001, all EHY defaults were initially assigned speculative grade ratings – no investment grade issue defaulted, a pattern that emerged in Standard & Poor's annual survey of European ratings performance three years in a row. Yet, European default rates are moving closer to the global average and the overall penetration of bond ratings in Europe has continued to increase – as more issues and issuers are rated, the numbers of events should even out. Still BBB-rated bonds account for 34 percent of the U.S. bond

[6] See Standard & Poor's "Global High Yield Bond & Bank Loan Ratings, Summer, 1999 for a fuller description of these complex issues.

market, but less than 30 percent in the U.K. While 20 percent of all European rated bonds outstanding are in the "speculative grade" category, 33 percent of new issuer ratings in 2001 were speculative grade, indicating a rising trend due to sluggish world economic growth.

Perhaps no one event more clearly exemplifies the combined impact of the strong U.S. presence in the EHY market and the lack of clear bondholder rights in insolvency than the bankruptcy of NTL. On April 16, 2002, British cable group NTL Inc. said it reached agreement in principle with an unofficial committee of its public bondholders on a comprehensive recapitalization. The recapitalization would result in the conversion of approximately $10.6 billion of debt into equity. To implement the proposals, NTL filed a pre-negotiated recapitalization plan in a Chapter 11 case under U.S. law. Under the proposals, the members of the unofficial committee, which held over 50 percent of the face value of NTL's public bonds, committed to providing up to $500 million in new financing to the company's operations. The U.S. bondholders were largely cable companies and their representatives. Because the proceedings took place in U.S. bankruptcy courts, the bondholders were given a role in the negotiations. The existing equity holders received only the option to obtain warrants with the right to buy more equity. In the end, the U.S. cable company bondholders obtained control of the British cable operator without "firing a shot."

4. Future of the EU Market for Corporate Control

EU initiatives are underway to bring their regulations in line with global regulatory and supervisory systems. Unfortunately, the fact that the EU lacks some of the institutions needed to underpin bond markets will necessarily hinder capital market developments. EU precedent is generally not favorable to changes in corporate control or to increases in efficiency despite former U.S. Secretary of the Treasury Larry Summers' reminder that "the goal is efficiency not competition." Competition is to be admired not for its own sake but because it generates efficiency. It is for this reason that there is no "magic number" for the market share of one firm in an industry that is automatically desirable.

In the last quarter of 2002, the EU Commission "proposed a new direction on takeover (sic) bids, trying to coax member states into accepting rather contentious legislation." (*The Banker*, January 2003, p. 20). For example, under the Enterprise Bill, which becomes law in the summer of 2003, directors face the possibility of jail – not only if they themselves collude or price-fix, but even if they *ought to have known* this was happening within the organization. While the EU appears to be moving in the right direction, it has a long way to go.

Box 2: Merger References – The EU Competition Commission Guidelines

Part 2 Substantial Lessening of Competition Test (SLC)
Section 2.4
The Commission's approach to assessing whether a merger results in, or may be expected to result in, a SLC 14 can be considered as a two-stage process. First the relevant market or markets for the goods or services concerned (hereafter referred to as products) are defined. Then the Commission assesses whether the merger would increase the market power of firms in the market so defined. Market power may be described most simply as the ability to raise price consistently and profitably above competitive levels (or where a buyer has market power, the ability to obtain prices lower than their competitive levels). In the case of horizontal mergers (ie mergers between firms operating at the same stage of the supply chain), for instance, this might occur through the elimination of an effective source of competition thereby weakening the rivalry among the players left in the market after the merger. However, firms with market power may simply opt not to compete as aggressively as they otherwise might, and, in so doing, allow costs to rise, reduce quality, restrict the diversity of choice and/or slow the rate of innovation. This is not to suggest, however, that a merger will always give rise to a SLC. For example, in some circumstances, a merger may enhance competition, particularly if it strengthens firms whose challenge to market leaders would be weak in the absence of the merger.

Some, such as Kohlberg Kravis Roberts & Co. (KKR), see reasons to believe that the EU will succeed. ("Private Equity Investors in the New European Marketplace," Edward A. Gilhuly, Managing Director, Kohlberg Kravis Roberts & Co., Ltd., United States-German Economic Yearbook 1999, p. 76-81) From their perspective, increasing competition, deregulation and privatization in the EU are factors that will drive merger, acquisition and divestiture activity. They also believe that European capital markets are becoming

deeper and more liquid, making it easier to execute investment transactions. Not unrelated to their optimism, KKR has been active for a number of years in the EU private equity markets (**Table 9**).

Table 9: KKR's investments in Europe

1999:		
TI Group plc	$157 million	UK
Wincor Nixdorf Holding GmbH & Co.	$700 million	Germany
2000:		
Wassall plc/Zumtobel AG	$1.2 billion	Austria
Tenovis Germany GmbH	$400 million	Germany
LambdaNet Communications SA (formerly FirstMark)	$101 million	Germany
Alea Group	$150 million	Switzerland
KKF.net AG	$46.8 million	Germany
2001:		
Alea Group	$100 million	Switzerland
2002:		
Demag Holding S.à.r.l..	€1.69 billion	Luxembourg
Legrand S.A.	€3.63 billion	France

Indeed, KKR entered the most restrictive of the EU's capital markets by making their first investment in France on December 10, 2002. The Wendel Consortium, consisting of Wendel Investissement and KKR, purchased from Schneider Electric 98 percent of the share capital of Legrand for €3.63 billion, corresponding to a value of €3.70 billion for 100 percent of the share capital.

IV. Policy Implications of the CAI

A. Selected EU Members

Nine of the members of the EU are ranked in the top 20 countries for Capital Access. Only **Greece** and **Italy** rank outside the top 30. Greece has the lowest score among EU countries in six of the 12 component scores. Italy, on the other hand, scored near the EU

median in nine of the subcategories. For Italy, poor scores in institutional environment (2.88), equity markets (3.50), bond markets (3.25), FDI flows (3.00) and portfolio flows (1.00) resulted in ranking outside the top 20.

The Italian institutional environment scores poorly for capital access primarily for state interference in business and the relatively large role of state-owned enterprises in the economy. Regarding international flows, most EU countries, including Greece, did relatively better in at least one of the international flow categories, offsetting a weaker score in the other. Italy, however, scored poorly in both direct investment and portfolio flows, most likely because of the general outflow of investment money.

Italian scores for equity and bond market access were near the EU median. The highest EU scores go to the Spanish equity markets (5.50) and the Greek bond markets (6.50). Despite efforts to encourage markets and market efficiency in Europe, fundamental problems persist in the market development of capital access there. As with most multinational issues, there is no "one-size-fits-all" solution to the problem. Unlike the accession countries, equity and bond market infrastructure is an unlikely deterrent to development in most EU countries. However, work remains to be done to cut investor costs and to raise market efficiency.
On January 23, 2003, the Group of 30 (2003) released an action plan to help national markets better deal with the stress and at risks placed on market infrastructure by market shocks, surging volumes, ongoing structural changes and potential terrorist attacks. These systems now involve trillions of dollars of transactions every day. "We … will significantly improve the safety and efficiency of international securities markets," said Sir Andrew Large, Deputy Governor of the Bank of England and Chairman of the G30 steering committee that determined the reform agenda. Perhaps our most important policy recommendation is that EU countries continue their active involvement in reforming and maintaining the securities market infrastructure that will support deep, liquid capital markets.

B. Selected Accession Countries

Of the thirteen accession countries, we have calculated CAI scores for eleven of them based on data availability. Of these, three countries ranked at the bottom: Bulgaria, Turkey, and Romania, in that order.

The situation in **Bulgaria** reflects the legacy of its banking crisis in 1996-1997. This situation is still contributing to quite restrictive credit practices. There is, moreover, weakness in the enforcement of creditor rights. As a result, there is a very low rate of financial intermediation that must be overcome for Bulgaria's CAI score to improve.

Turkey suffered a financial crisis in early 2001. It is now in the process of restructuring its financial markets, with the role of state being reduced and regulations being liberalized. The entire financial sector had been dominated by the banking sector, with state banks dominating the market. This was due to their emphasis on providing credit on subsidized terms to specific sectors, such as agriculture, favored by the government. Greater privatization and foreign entry into the banking sector should help improve Turkey's CAI scores.

Romania ranks lowest among the accession countries for which we have been able to calculate scores for 2003. Over the past decade Romania suffered from high inflation, financial fragility, and political instability. It still has an underdeveloped banking sector resulting from its relatively slow pace of economic, institutional, and regulatory reform. Much more emphasis has to be put on promoting the growth of the private sector. Corruption has to be reduced as well in order to improve Romania's CAI score. The history of direct government intervention with consequent poor economic performance must be dramatically changed.

V. Global Capital Access Index 2003

Figures 15 and 16 illustrate the distribution in the Capital Access Index (CAI) score in a histogram for the year 2002 and 2003. For comparative purposes, only the 84 countries

common to both years are included in the histograms. In 2002, 57 countries received a score between 3.50 and 4.99. This number dropped to 53 countries in 2003. The 2003 index is more dispersed. This is reflected in the histograms by the fact that the tail of the distribution increased and the center of the distribution flattened.

Figure 15: Distribution of Score for CAI 2002

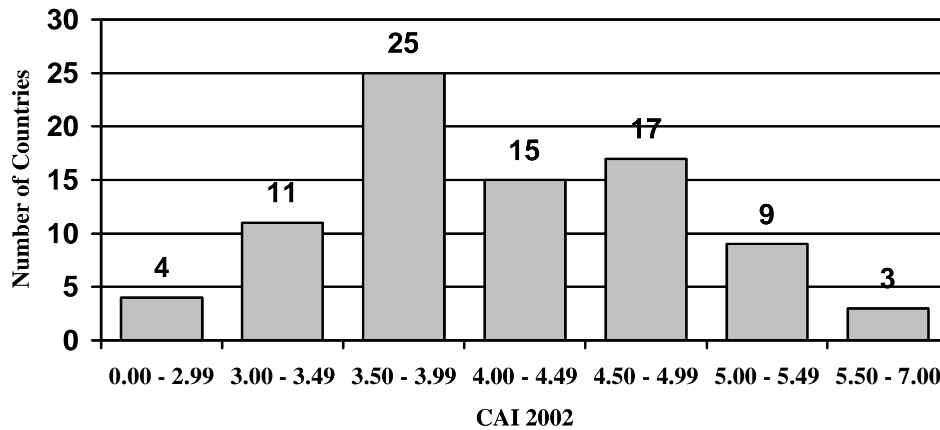
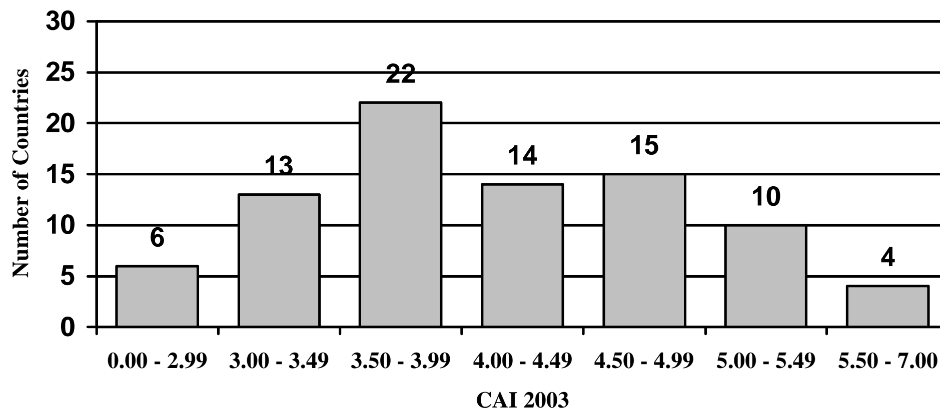


Figure 16: Distribution of Score for CAI 2003



A. Improving Scores

In the continuing effort to extend the country coverage, we included five new countries – Bahrain, Barbados, Kuwait, Lebanon and Vietnam – in this year's CAI. However, we dropped 14 countries due to lack of data, bringing the net coverage to 89 countries. Of the 84 common to both the 2002 and 2003 CAI, three countries remained unchanged, 42

achieved a better score while 39 country's scores declined. Cross-country averages of the score increased from 4.01 to 4.12. For consistency across time, calculation methodology and number of variables remained the same as last year.

1. Progress in Country Scores

The only country for which the score increased more than 0.20 point was Greece. The score increased by 0.32, rising from 3.96 to 4.28, an increase of more than 8 percent from last year's score. This increase was due to the improvement in areas such as inflation, corporate income tax, lending rates and banking development. Argentina, Uruguay, Romania, Moldova, El Salvador, Sri Lanka, Venezuela and Zimbabwe are countries whose scores declined 0.20 or more. Worsening of the banking sector is a common factor affecting the access to capital in these countries.

2. Progress in Component Scores

Across countries, there are 54 variables that constitute the CAI. Twenty increased on average, 14 showed no change, while 20 variables decreased on average. The largest improvement was in equity price volatility, which has settled down over the last five years allowing entrepreneurs to forecast the risk more accurately. The largest decline was in bank reserve to total bank assets (BR2) which reflects banks becoming more cautious in their portfolio management, thus making access to credit more difficult.

The trend in Global Capital Access is broadly positive. Seven out of the twelve subcategories in the CAI improved in 2002 including the general economic environment subcategory (**Table 10**). This improvement reflects the successful macroeconomic and institutional reform efforts many countries have carried out over the past several years. However, there was some degree of worsening in the international environment subcategory. This largely reflects a flight of capital away from tradable securities and into bank deposits. While this has resulted in improved bank lending, it has also led to decreased equity and debt financing.

Table 10: Changes in Sub-Categories across All Countries

	CAI 2003 (Avg.)	Change From 2002*	Number of Underlying Variables	Number of Observations
Environment, Macroeconomic (EM)	5.11	0.16	6	492
Environment, Institutional (EI)	3.34	0.07	8	550
Banking, Depth (BD)	3.23	0.19	4	442
Banking, Governance (BG)	4.79	0.29	5	374
Banking, Repression (BR)	5.50	-0.39	4	226
Capital Markets, Equity (KE)	3.14	0.18	6	464
Capital Markets, Bonds (KB)	3.33	-0.16	4	150
Capital Markets, Advanced (KA)	3.76	-0.04	5	320
International, General (IG)	5.02	0.16	6	421
International, FDI Flows (IF)	4.35	-0.02	1	83
International, Portfolio Flows (IP)	3.22	-0.04	3	193
Sovereign Debt Ratings (S)	5.08	0.06	2	159

* Comparisons of CAI scores are between countries included in *both* CAI 2002 and CAI 2003

CAI Accession Country Reports

1. The Winners

Hungary was the highest ranked accession country in 2001. With the improvement in its 2002 score, Hungary now boasts a level of access to capital that rivals that of Italy. From an initially hesitant start after the collapse of communism, reforms have moved ahead in Hungary at a rapid pace and the country now is one of the Eastern European markets most favored by investors. Hungary's communist past left it with a history of deficits and international debt, a legacy that the country continues to deal with. However, Hungary has some of the best-developed capital markets in Eastern Europe. Hungary's CAI score improvements are due chiefly to an increase in the bank assets-to-GDP ratio and an increase in FDI as a share of GDP.

Estonia is the clear success story of the former Soviet Union and offers its entrepreneurs a level of capital access that exceeds all but one of the 12 accession countries and all countries of the former Soviet Union. Price stability and convertibility are guaranteed by

a currency board and inflation has declined from more than 10 percent in 1997 to less than 5 percent in 2002. Estonia's score remained unchanged in 2002 with an improvement in the banking sector due to a decreasing reserves-to-assets ratio offset by a decline in portfolio flows, particularly fixed income flows.

Poland adopted a gradualist approach to economic reform but it has made steady and impressive progress. As a result, Poland has the third highest CAI score in the group of accession countries and has become a firm favorite with foreign investors. Good progress has been made especially in macroeconomic stabilization with inflation being reduced from a 1997 rate of 15 percent to 5 percent in 2001. This continuing disinflation provided Poland with a slight increase in its score in 2002.

Slovenia was always the most economically advanced republic of the former Yugoslavia, and has maintained its status as one of the accession countries with highest access to capital. Although it continues to rank high on the CAI, Slovenia's score declined in 2002, largely as a result of its failure to reduce a stubbornly high rate of inflation. Slovenian monetary policy remains largely accommodating to inflationary pressures and, unlike other countries that have liberalized prices, much of the Slovenian economy remains subject to price or interest rate controls.

2. The Losers

Latvia's score improved slightly in 2002, but it remains the fourth lowest accession country on the CAI. Latvia has made good progress in reducing inflation and its financial intermediation sector has grown strongly since 1997. However, growth has been from very low levels and bank assets still comprise less than 30 percent of GDP. Foreign ownership of banks is relatively high at nearly 70 percent of bank capital and bank credit ratings improved markedly, increasing Latvia's CAI score in 2002.

Bulgaria improved its CAI score in 2002 but remains in the bottom third of the index and Bulgarian entrepreneurs and companies still lack widespread access to capital. It has, however, made improvements. Following its currency crisis in 1997, Bulgaria introduced

a currency board that pegged the leva to the Deutschmark, backed the money supply with foreign currency (now euros) and guaranteed convertibility. From a high of more than 1,000 percent, Bulgarian inflation has fallen steeply to 6.4 percent in 2002. At the same time, the currency board involved substantial official sector assistance that allowed for the rebuilding of Bulgarian foreign reserves. The improvement in Bulgaria's CAI score is due to this successful stabilization that has brought substantial improvements in inflation rates, interest rates and foreign reserves.

Turkey, like Bulgaria, was a winner in terms of improvement in its CAI score but maintained a low level of capital access despite this. Turkey has been recently subject to two financial crises and an extremely high rate of inflation. In the EU's 2002 report on the progress of accession countries it is noted that "Turkey has been unable to make further progress towards achieving a functioning market economy." Despite this assessment, the country's CAI score improved markedly in 2002 due to an improvement in the Turkish corporate bond market.

Romania is the accession country with most restricted access to capital. Lacking even modest levels of capital market development, Romania has, until recently, hindered its development by limiting the free movement of capital. In a positive step, the Bank of Romania announced the liberalization of a limited number of types of capital transactions in 2001 and set a 2004 target for further liberalization. Despite certain positive actions, Romania's equity market has become more illiquid and the ratio of bank reserves to bank assets sharply increased, worsening the country's 2002 score.

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Appendix 1: Data Description for CAI 2002

Macroeconomic and Institutional Environment

EM – Environment, Macroeconomic

- EM1 Inflation Rate: The annual inflation rate averaged over a three-year period (1999–2001). Source: International Monetary Fund, 2003. *International Financial Statistics* (line 64), February.

- EM2 Prime Rate Deviation from 6 percent: Measures the average value of the year-end prime lending rate deviation from 6.00 percent over a three-year period (1999–2001). Source: International Monetary Fund, 2003. *International Financial Statistics* (line 60p), February.

- EM3 Normalized Interest Rate Volatility: Standard deviation of monthly observations (1997–2001) of the annual lending rate, normalized by the mean. Source: International Monetary Fund, 2003. *International Financial Statistics* (line 60p), February.

- EM4 Government Expenditure percent of GDP: The annual percent of GDP represented by Government consumption averaged over a three-year period (1999–2001). Source: International Monetary Fund, 2003. *International Financial Statistics* (lines 91f and 99b), February.

- EM5 Corporate Income Tax Rate: The maximum income tax rate assessed to corporations. Source: The Heritage Foundation and Dow Jones & Company, Inc., *2002 Index of Economic Freedom.*

- EM6 Capital Gains Tax Rate: The maximum tax rate assessed to foreigners for their capital gains. Source: The Salomon Smith Barney *Guide to World Equity Markets*, 2002. Euromoney Publications PLC.

EI – Environment, Institutional

- EI1 Property Rights and Contract Enforcement: Equally weighted average of the International Country Risk Guide's Law and Order and scale-adjusted The Heritage Foundation's property right index. Source: PRS Group, 2002, *International Country Risk Guide*, December. The Heritage Foundation and Dow Jones & Company, Inc., *2002 Index of Economic Freedom.*

- EI2 Corruption Perception Index: based on survey results on perceptions of corruption from local and foreign business executives. Source: Transparency International, 2002, http://www.transparency.org.

- EI3 State Interference in Business: Scores based on survey responses to the questions on how government regulations interfere with business operations from CFOs, equity analysts, bankers and consultants. Source: Milken Institute, 2002.

- EI4 Role of State-Owned Enterprises: Scores based on response to the question: "State-owned or state-controlled enterprises do not have a dominant role in your economy." Source: World Economic Forum, 1997, *The Global Competitiveness Report, 1997.*

- EI5 Government Regulation: Scores based on response to the question: "Burdensome administrative regulations are not pervasive." Source: World Economic Forum, 2002, *The Global Competitiveness Report, 2001-2002.*

- EI6 Creditor Rights: A variable measuring whether or not bankruptcy laws in a country give preferential treatment to nonsecured creditors (government, employees,

etc.) over secured creditors. Source: La Porta, Rafael, et. al., 1997, Law and Finance. *National Bureau of Economic Research*. Galindo, Arturo and Alejandro Micco, 2001, Creditor Protection and Financial Cycles. Inter-American Development Bank, Working Paper, #443.

- EI7 Accounting Standards: Index based on the differences of recognition and disclosure of national accounting standard from the international accounting standards. Source: International Forum on Accountancy Development, 2001, *GAAP 2001: A Survey of National Accounting Rules Benchmarked against International Accounting Standards.* http://www.ifad.net

- EI8 O-factor Survey: Composite score for corruption and various types of transparency (legal, accounting, economic and regulatory), based on international survey responses from CFOs, equity analysts, bankers and consultants. Source: Milken Institute, 2002.

Banking

BD – Banking, Depth

- BD1 Claims to Non-Financial Firms / GDP: The three-year average (1999–2001) of the annual ratio of bank claims to non-financial private firms as a percentage of the year's GDP. Source: International Monetary Fund, 2003, *International Financial Statistics* (lines 22d and 99b), February.

- BD2 Bank Assets percent of GDP: The three-year average (1999–2001) of the annual ratios of bank assets as a percentage of GDP. Bank assets are defined as the sum of reserves, foreign assets and total claims (except claims on other financial institutions). Source: International Monetary Fund, 2003, *International Financial Statistics* (lines 20, 21, 22a, 22b, 22c, 22d, 22f, 22g and 99b), February.

- BD3 Domestic Assets percent of GDP: The three-year average (1999–2001) of the annual ratios of bank's domestic assets as a percentage of GDP, and where domestic bank assets are defined as the sum of reserves and total claims (except claims on other financial institutions). Source: International Monetary Fund, 2003, *International Financial Statistics* (lines 20, 22a, 22b, 22c, 22d, 22f, 22g and 99b), February.

- BD4 Claims of Domestic Private Sector percent of Total Domestic Claims: The three-year average (1999–2001) of the annual percentage of total bank claims (excluding claims to other financial institutions) represented by bank claims to nonfinancial private firms. Source: International Monetary Fund, 2003, *International Financial Statistics* (lines 22a, 22b, 22c, 22d, 22f and 22g), February.

- BD5 Ratio of Claims to Assets: The ratio of the claims of domestic private sector variable (BD1) to the total bank assets variable (BD2). Source: International Monetary Fund, 2003, *International Financial Statistics* (lines 20, 21, 22a, 22b, 22c and 22d), February.

BG – Banking, Governance

- BG1 Moody's Bank Rating: Average bank deposit rating across banks within each country. Source: Moody's Investors Services, 2003.

- BG2 Bank Concentration Ratio: Bank assets of top three banks to total bank assets for a country. Source: Barth, James R., Gerard Caprio, Jr. and Ross Levine, 2001, Database on Bank Regulation and Supervision, World Bank. http://www.worldbank.org/research/interest/prr_stuff/reg_guideline.htm

- BG3 State Ownership of Banks: Percentage of total bank assets in a country owned or controlled by its government. Source: Barth, James R., Gerard Caprio, Jr. and Ross Levine, 2001, Database on Bank Regulation and Supervision, World Bank. http://www.worldbank.org/research/interest/prr_stuff/reg_guideline.htm

- BG4 Entry to Banking Industry: Scores based on response to the question: The entry of new banks into the domestic banking industry is easy and subject only to reasonable regulations. Source: World Economic Forum, 2002, *The Global Competitiveness Report, 2001-2002.*

- BG5 Rate Spread: Average interest rate spread (2001). Source: International Monetary Fund, 2003, *International Financial Statistics* (lines 60l and 60p), February.

BR – Banking, Repression

- BR2 Reserve Requirements: The three-year average (1999–2001) of the annual ratios of bank reserves to total bank assets. Source: International Monetary Fund, 2003, *International Financial Statistics* (lines 20, 21, 22a, 22b, 22c and 22d), February.

- BR3 Real Interest Rate Deviation from 3 percent: The three-year average (1999–2001) of the absolute value of the year-end real interest rate deviation from 3.00 percent. Source: International Monetary Fund, 2003, *International Financial Statistics* (lines 60p and 64p), February.

- BR4 Interest Rate Controls: Scores based on response to the question: Interest rates on bank deposits and/or loans are freely determined by the market. Source: World Economic Forum, 2000, *The Global Competitiveness Report, 2000.*

Capital Markets

KE – Capital Markets, Equity

- KE1 Equity Market Cap / GDP: The three year average (1999–2001) of the annual ratio of total market capitalization of all firms listed in domestic stock exchanges compared to the country's gross domestic product (GDP). Sources: Standard &

Poor's, 2002*, Emerging Stock Market Factbook*, and International Monetary Fund, 2003, *International Financial Statistics* (line 99b), February.

- KE2 Equity Market Liquidity: The three year average (1999–2001) of the annual ratio of the dollar volume of shares traded divided by the equity market capitalization. Sources: Standard & Poor's, 2002*, Emerging Stock Market Factbook*.

- KE3 Average IPO Formation Rate: The three-year average (1999–2001) of the annual net change in the number of stock exchange listed companies relative to the average number of companies listed during the same year. Sources: Standard & Poor's, 2002*, Emerging Stock Market Factbook*.

- KE4 Relative Equity Market Volatility: Standard deviation of weekly observations (1999–2002) of the leading stock market index, normalized by the mean. Source: Datastream.

- KE5 Firm Concentration: Market capitalization of the 10 largest listed firms divided by total market capitalization. Source: *The Salomon Smith Barney Guide to World Equity Markets, 2002*. Euromoney Publications PLC.

- KE6 Number of Companies listed per million persons: The number of companies listed in a country as of December 2001, divided by the country's population (in millions). Sources: Standard & Poor's, 2002*, Emerging Stock Market Factbook*, and International Monetary Fund, 2003, *International Financial Statistics* (line 99z), February.

KB - Capital Markets, Bonds

- KB1 Private Sector Domestic Securities / GDP: The three-year average (1999–2001) of the ratio of Private Sector Domestic Debt Securities outstanding to GDP, and where Private Sector Domestic Debt Securities are defined as the money market

instruments, bonds and notes issued by a country's private sector. Sources: Bank for International Settlements, 2002, *Quarterly Review*, November and International Monetary Fund, 2003, *International Financial Statistics* (line 99b), February.

- KB2 Public Sector Domestic Securities / GDP: The three-year average (1999–2001) of the ratio of Public Sector Domestic Debt Securities outstanding to GDP, and where Public Sector Domestic Debt Securities are defined as the money market instruments, bonds and notes issued by a country's public sector. Sources: Bank for International Settlements, 2002, *Quarterly Review*, November and International Monetary Fund, 2003, *International Financial Statistics* (line 99b), February.

- KB3 Market Adjusted Debt Ratio: Interpreted as Private Domestic Debt Securities / (Private Domestic Debt Securities + Equity Market Capitalization.) Bank for International Settlements, 2002, *Quarterly Review*, November, and Standard & Poor's, 2002*, Emerging Stock Market Factbook*.

- KB4 Private to Public Sector Domestic Securities Ratio: The ratio of the Private Sector Domestic Securities variable (KB1) to Public Sector Domestic Debt Securities variable (KB2). Sources: Bank for International Settlements, 2002, *Quarterly Review*, November and International Monetary Fund, 2003, *International Financial Statistics* (line 99b), February.

KA – Capital Markets, Advanced

- KA1 Venture Capital Funds: The three-year average (2000–2002) of the annual amount of venture capital made available to firms in a country. Sources: SDC Platinum, Securities Data Corporation.

- KA2 Bond Market Development: Scores based on response to the question: Bond markets are highly developed for public and corporate finance. Source: World Economic Forum, 2002, *The Global Competitiveness Report, 2001-2002.*

- KA3 Venture Capital Funds / GDP: The three-year average (1999–2001) of the annual amount of venture capital made available to firms in a country as a percentage of that country's GDP. Sources: SDC Platinum, Securities Data Corporation and International Monetary Fund, 2003, *International Financial Statistics* (line 99b), February.

- KA4 Availability of Venture Capital: The three-year average (1999–2001) of the response to the question: Venture capital is readily available for new business development. Source: *The Global Competitiveness Report*, 1999, 2000 and 2001-2002. World Economic Forum.

- KA5 Private Placements / GDP: The three-year average (1999–2001) of the ratio between the amount of private placements of equity in a country and that country's GDP. Sources: SDC Platinum, Securities Data Corporation and International Monetary Fund, 2003, *International Financial Statistics* (line 99b), February.

International

IG – International, General

- IG1 Total Reserves / GDP: The three-year average (1999–2001) of the ratio between a country's foreign reserves (excluding gold) and its GDP. Source: International Monetary Fund, 2003, *International Financial Statistics* (lines 1ld and 99b), February.

- IG2 Foreign Investment Ceiling: The maximum percentage of ownership of any given company allowed to foreigners. Source: Standard & Poor's, 2002*, Emerging Stock Market Factbook.*

- IG3 Foreign Access to Domestic Markets: Scores based on response to the question: Foreigners are free to invest in stocks and bonds. Source: World Economic Forum, 2002, *The Global Competitiveness Report, 2001-2002.*

- IG5 Relative Currency Volatility: Standard deviation of weekly observations (1998–2002) of the exchange rate for the national currency, normalized by the mean. Source: Datastream.

- IG6 International Bonds issued by Private Corps: The three-year average (2000–2002) of the annual issuance of International bonds by private firms in a country as a percentage of all international bonds issued by private corporations worldwide. Source: Capital Data, Bondware.

- IG7 International Equities issued by Private Corps: The three-year average (2000–2002) of the annual issuance of International equity securities issued by private firms in a country as a percentage of all international equity securities issued by private corporations worldwide. Source: Capital Data, Bondware.

IF – International, Foreign Direct Investment

- IF1 FDI / GDP: The three-year average (1999–2001) of the annual net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor, relative to the host economy's GDP. Source: International Monetary Fund, 2003, *International Financial Statistics* (lines 78bed and 99b), February.

IP – International, Portfolio Flows

- IP1 Stock: Portfolio Flows / GDP: The three-year average (1998–2000) of the annual net flows of non-debt-creating portfolio equity flows relative to the host economy's GDP Sources: World Bank, 2002, *World Development Indicators 2002* and

International Monetary Fund, 2003, *International Financial Statistics* (line 99b), February.

- IP2 Bonds: Portfolio Flows / GDP: The three-year average (1998–2000) of the annual net flows of bond issues purchased by foreign investors relative to the host economy's GDP. Sources: World Bank, 2002, *World Development Indicators 2002* and International Monetary Fund, 2003, *International Financial Statistics* (line 99b), February.

- IP3 Total Portfolio Flows / GDP: The three-year average (1998–2000) of the annual net flows created by transactions in which foreigners purchase or dispose of equity securities and/or debt securities in an economy other than its own, relative to the host economy's GDP. Sources: World Bank, 2002, *World Development Indicators 2002* and International Monetary Fund, 2003, *International Financial Statistics* (line 99b), January

Sovereign

- S1 Moody's Sovereign Ratings: Moody's indicator of the sovereign and supranational credit quality of a country. Source: Moody's Investor Services, 2003.

- S2 S & P Sovereign Ratings: Standard and Poor's indicator of the sovereign and supranational credit quality of a country. Source: Standard and Poor's Sovereign Rating Services, 2003.

Appendix 2: Years and Methodology for CAI Variable Scores

	Variable	CAI 2003	CAI 2002	Methodology
EM1	Inflation Rate	1999-2001	1998 - 2000	3 Year Average
EM2	Prime Rate Deviation from 6 percent	1999-2001	1998 - 2000	3 Year Average
EM3	Normalized Interest Rate Volatility	1997-2001	1996 - 2000	5 Year Volatility
EM4	Government Expenditure / GDP	1999-2001	1998 - 2000	3 Year Average
EM5	Corporate Income Tax	2002	2001	Year-End
EM6	Capital Gains Tax	2002	2001	Year-End
EI1	Property Rights, Contract Enforcement	2002	2001	Single Observation
EI2	Corruption Perception Index	2002	2001	Single Observation
EI3	State Interference in Business	2002	2002	Single Observation
EI4	Role of State-Owned Enterprises	1996	1996	Single Observation
EI5	Government Regulation	2001	2001	Single Observation
EI6	Creditor Rights	1997	1997	Single Observation
EI7	Accounting Standards	2001	2001	Single Observation
EI8	O-Factor Survey	2001	2001	Single Observation
BD1	Claims to Non- Financial Firms / GDP	1999-2001	1998 - 2000	3 Year Average
BD2	Bank Assets / GDP	1999-2001	1998 - 2000	3 Year Average
BD3	Domestic Assets to GDP	1999-2001	1998 - 2000	3 Year Average
BD4	Claims of Dom. Priv. Sect. to Total Dom.	1999-2001	1998 - 2000	3 Year Average
BD5	Ratio of Claims to Assets	1999-2001	1998 - 2000	3 Year Average
BG1	Moody's Bank Rating	2002	2001	Single Observation
BG2	Bank Concentration Ratio	1999	1999	Single Observation
BG3	State Ownership of Banks	1999	1999	Single Observation
BG4	Entry to Banking Industry	2001	2001	Single Observation
BG5	Interest Rate Spread	2001	2001	Single Observation
BR2	Reserve Requirements	1999-2001	1998 - 2000	3 Year Average
BR3	Real Interest Rate Deviation from 3 percent	1999-2001	1998 - 2000	3 Year Average
BR4	Interest Rate Controls	2000	2000	Single Observation
KE1	Equity Market Cap / GDP	1999-2001	1998 - 2000	3 Year Average
KE2	Equity Market Liquidity	1999-2001	1998 - 2000	3 Year Average
KE3	Average IPO Formation Rate	1999-2001	1998 - 2000	3 Year Average
KE4	Relative Equity Market Volatility*	1998-2002	1996 - 2000	5 Year Volatility
KE5	Firm Concentration	2001	2000	Single Observation
KE6	# of Companies listed per million persons	2001	2000	Single Observation
KB1	Private Sector Domestic Securities / GDP	1999-2001	1998 - 2000	3 Year Average
KB2	Public Sector Domestic Securities / GDP	1999-2001	1998 - 2000	3 Year Average
KB3	Market Adjusted Debt Ratio	2001	2000	Single Observation
KB4	Private to Public Sector Domestic Securities	1999-2001	1998 - 2000	3 Year Average

* We are able to update these variables to year end 2002.

	Variable	CAI 2003	CAI 2002	Methodology
KA1	Venture Capital Funds	2000-2002	1999 - 2001	3 Year Average
KA2	Bond Market Development	2001	2001	Single Observation
KA3	Venture Capital Funds / GDP	1999-2001	1998 - 2000	3 Year Average
KA4	Availability of Venture Capital	1999-2001	1998 - 2000	3 Year Average
KA5	Private Placements / GDP	1999-2001	1998 - 2000	3 Year Average
IG1	Total Foreign Reserves / GDP	1999-2001	1998 - 2000	3 Year Average
IG2	Foreign Investment Ceiling	2002	2001	Single Observation
IG3	Foreign Access to Domestic Markets	2001	2001	Single Observation
IG5	Relative Currency Volatility*	1998-2002	1996 - 2000	5 Year Volatility
IG6	International Bonds issued by Priv. Corps	2000-2002	1999 - 2001	3 Year Average
IG7	International Equities issued by Priv. Corps	2000-2002	1999 - 2001	3 Year Average
IF1	FDI / GDP	1999-2001	1998 - 2000	3 Year Average
IP1	Stock: Portfolio Flows / GDP	1998-2000	1997 - 1999	3 Year Average
IP2	Bonds: Portfolio Flows / GDP	1998-2000	1997 - 1999	3 Year Average
IP3	Total Portfolio Flows / GDP	1998-2000	1997 - 1999	3 Year Average
S1	Moody's Sovereign Ratings	2002	2001	Single Observation
S2	S & P Sovereign Ratings	2002	2001	Single Observation

Appendix 3: 2003 Capital Access Index: Sub-Category Scores

Country	CAI 2002 Score	Environment, Macroeconomic EM	Environment, Institutional EI	Banking, Depth BD	Banking, Governance BG	Banking, Repression BR
Argentina	3.52	4.83	2.50	2.00	4.60	5.67
Australia	5.12	4.83	5.13	5.00	5.60	6.67
Austria	4.69	4.83	5.00	5.00	6.00	6.67
Bahrain	4.66	6.33	6.00	2.80	5.00	5.50
Bangladesh	3.52	5.67	1.33	2.20	3.33	6.00
Barbados	4.30	5.00		3.00	5.00	6.00
Belgium	4.69	5.33	4.13	4.00	6.00	6.67
Bolivia	3.62	4.80	1.67	3.60	4.60	5.00
Brazil	3.48	4.17	2.38	2.20	3.80	3.67
Bulgaria	3.53	4.50	2.33	1.20	4.00	5.33
Canada	5.25	5.33	5.25	4.20	5.80	7.00
Chile	4.58	5.83	4.38	4.40	5.20	6.33
China	4.18	5.67	2.00	5.40	4.00	4.33
Colombia	3.33	3.67	1.86	2.40	4.33	5.33
Costa Rica	3.37	4.80	2.25	2.40	4.33	4.00
Croatia	3.97	4.67	2.50	2.40	4.25	5.50
Czech Republic	4.02	5.17	2.86	2.60	4.80	5.33
Denmark	5.12	5.40	5.88	5.00	5.60	7.00
Dominican Republic	3.55	5.60	1.67	2.40	4.33	3.50
Ecuador	3.10	4.50	2.67	3.40	3.50	3.00
Egypt	3.98	5.83	3.25	2.80	4.00	4.33
El Salvador	3.53	6.00	2.67	2.80	4.75	4.00
Estonia	4.17	4.50	4.17	1.60	5.20	6.00
Finland	5.02	5.83	5.50	3.80	5.40	7.00
France	4.72	5.20	3.25	4.40	5.80	6.33
Germany	5.02	5.50	4.50	5.20	5.60	6.67
Ghana	2.70	4.75	2.00	1.00	1.50	6.00
Greece	4.28	5.33	2.00	2.80	4.60	4.67
Guatemala	3.46	5.40	1.50	2.60	5.00	4.50
Honduras	3.78	4.80	2.00	3.20	4.80	4.50
Hong Kong	5.74	6.67	6.13	5.60	6.40	6.00
Hungary	4.35	5.33	3.71	2.60	6.25	6.00
Iceland	4.67	4.40	5.20	5.00	5.50	6.00
India	3.71	5.17	3.00	2.20	4.50	5.00
Indonesia	3.64	5.00	3.13	1.40	3.40	5.00
Ireland	5.12	6.00	5.13	5.40	6.00	7.00
Israel	4.77	4.83	4.00	4.40	4.60	5.00
Italy	4.35	4.50	2.88	4.20	5.60	6.33
Ivory Coast	3.52	5.75	1.75	2.20		7.00
Jamaica	3.42	4.50	2.67	1.60	3.00	4.50
Japan	4.78	4.83	3.75	5.20	6.20	6.33
Jordan	4.14	5.17	3.00	3.40	5.00	3.67
Kenya	3.37	4.83	3.50	2.20	3.67	5.00
Kuwait	4.67	6.00	4.00	2.80	5.75	7.00
Latvia	3.84	5.33	2.17	1.40	5.20	6.00
Lebanon	4.26	6.00	2.00	4.00	5.00	5.00
Lithuania	3.85	5.50	2.67	1.20	4.00	5.50
Luxembourg	5.20	5.50	5.25	4.80	6.67	7.00

Country	CAI 2002 Score	Environment, Macroeconomic EM	Environment, Institutional EI	Banking, Depth BD	Banking, Governance BG	Banking, Repression BR
Malaysia	4.60	6.00	3.33	4.40	5.00	4.67
Mauritius	3.90	5.00	3.75	3.60	3.00	5.00
Mexico	3.69	5.00	3.00	1.20	4.60	5.67
Moldova	3.43	4.20	2.00	1.60	4.00	5.00
Morocco	3.95	5.50	2.80	3.40	4.25	5.50
Netherlands	5.48	5.00	5.75	5.60	5.80	7.00
New Zealand	5.19	5.33	6.00	5.60	6.00	6.67
Nicaragua	3.75	5.00	1.83	3.20	4.60	5.00
Nigeria	3.63	5.00	2.75	1.40	5.75	5.00
Norway	4.56	5.00	4.63	4.40	3.75	6.67
Pakistan	3.56	5.50	3.17	2.20	3.00	5.00
Panama	4.18	5.60	2.75	3.00	5.80	6.00
Paraguay	2.81	4.80	1.17	2.20	3.80	3.50
Peru	3.84	5.50	3.25	2.40	4.60	4.33
Philippines	3.80	5.33	2.38	2.40	5.40	6.00
Poland	4.14	5.33	2.57	2.00	5.40	5.00
Portugal	4.62	4.40	3.33	5.80	6.25	7.00
Romania	3.14	4.75	2.50	1.00	4.25	1.00
Russia	2.82	3.67	2.29	1.00	3.60	3.67
Saudi Arabia	3.32	4.25	3.25	1.60	5.33	6.00
Singapore	5.50	6.50	5.88	5.00	5.80	6.67
Slovak Republic	4.02	3.83	2.86	2.00	5.00	6.00
Slovenia	4.07	4.17	3.50	2.80	4.60	7.00
South Africa	4.50	5.17	3.63	4.40	5.60	6.00
South Korea	4.83	5.17	3.75	5.00	5.00	5.67
Spain	4.94	5.00	4.00	4.80	6.00	6.67
Sri Lanka	3.46	5.33	3.00	2.40	3.67	6.00
Sweden	4.92	5.17	5.17	3.00	5.25	6.67
Switzerland	5.40	6.20	5.00	5.80	5.40	7.00
Taiwan	4.88	6.00	3.13	5.60	5.00	5.50
Thailand	4.26	5.50	3.38	4.80	4.20	6.00
Trinidad & Tobago	4.00	5.67	3.75	2.60	3.80	4.50
Tunisia	4.12	5.50	3.60	4.20	5.00	7.00
Turkey	3.48	4.00	2.25	1.60	4.00	6.00
Ukraine	2.88	4.00	2.00	1.80	2.67	3.33
United Kingdom	5.63	5.60	6.13	5.40	7.00	7.00
United States	5.55	5.67	5.25	4.00	6.80	7.00
Uruguay	3.20	4.00	3.33	3.00	3.60	3.00
Venezuela	2.96	4.17	1.75	1.60	4.20	4.00
Vietnam	3.67	5.60	1.50	3.20	3.67	5.00
Zimbabwe	2.69	3.17	2.14	1.40	3.50	4.00

Black space = Data not available

Appendix 3: 2003 Capital Access Index: Sub-Category Scores

Country	Capital Markets, Equity KE	Capital Markets, Bonds KB	Capital Markets, Advanced KA	International, General IG	International, FDI Flows IF	International, Portfolio Flows IP	Sovereign Debt Ratings S
Argentina	2.17	3.00	3.80	4.67	5.00	3.67	1.50
Australia	4.50	3.75	5.80	5.00	3.00	5.00	7.00
Austria	3.20	2.50	4.20	4.80	4.00	4.00	7.00
Bahrain	3.20			5.00	5.00	1.00	5.50
Bangladesh	2.25		1.50	5.25	3.00	3.00	
Barbados	3.00			4.67	3.00	4.00	5.50
Belgium	3.50	4.00	5.20	4.25		1.00	7.00
Bolivia	2.50		1.00	5.33	7.00	3.00	3.50
Brazil	3.00	3.25	4.20	4.83	5.00	3.67	3.00
Bulgaria	2.25		3.40	5.60	6.00	3.00	4.00
Canada	5.50	4.00	5.80	4.80	6.00	1.00	7.00
Chile	3.83	3.00	3.20	5.40	7.00	3.33	5.50
China	4.50	3.00	3.60	5.17	4.00	3.33	5.50
Colombia	2.50		2.75	5.20	4.00	3.33	4.00
Costa Rica	1.00		2.00	4.75	4.00	3.33	4.00
Croatia	2.67		3.67	5.20	6.00	4.33	5.00
Czech Republic	3.00	2.50	3.60	5.80	7.00	3.67	6.00
Denmark	3.67	3.25	5.00	5.20	7.00	1.00	7.00
Dominican Republic	1.00		2.00	4.25	6.00	3.00	4.00
Ecuador	1.00		1.67	4.75	6.00	3.00	1.50
Egypt	3.83		2.67	5.17	3.00	3.33	4.00
El Salvador	1.00		1.67	4.75	3.00	3.33	4.50
Estonia	2.33		3.60	5.80	7.00	4.67	6.00
Finland	3.83	3.50	5.20	5.20	5.00	2.00	7.00
France	4.00	3.50	5.60	5.80	2.00	3.00	7.00
Germany	4.50	3.00	5.60	5.80	2.00	1.00	7.00
Ghana	2.17		2.00	4.00	3.00	3.00	
Greece	4.33	6.50	4.00	5.67	3.00	7.00	6.00
Guatemala	3.00		1.67	4.50	3.00	3.00	4.00
Honduras	1.00		2.00	6.00	5.00	3.00	3.00
Hong Kong	4.83	3.25	5.40	6.40	7.00		6.00
Hungary	3.00	2.75	4.00	5.50	5.00	4.33	6.00
Iceland	4.00	3.50	4.75	3.80	3.00	5.00	6.50
India	3.83	1.33	4.80	3.50	3.00	3.67	4.00
Indonesia	3.17		4.40	5.33	1.00	3.00	2.50
Ireland	3.33	3.50	5.40	5.00	7.00	1.00	7.00
Israel	4.00		5.80	5.67	4.00	5.00	6.00
Italy	3.50	3.25	4.80	5.40	3.00	2.00	7.00
Ivory Coast	2.60		5.00	5.33	4.00	3.00	
Jamaica	2.33		3.00	5.40	7.00	3.67	3.50
Japan	4.17	4.00	5.00	5.00	2.00	2.00	7.00
Jordan	3.20		3.00	5.67	6.00	3.33	4.00
Kenya	2.00			4.00	3.00	3.00	
Kuwait	3.67			5.00	2.00	1.00	6.00
Latvia	2.20		3.50	5.17	5.00	3.33	5.50
Lebanon	2.00			6.00		3.67	3.00
Lithuania	2.83		3.80	5.00	5.00	4.67	5.00
Luxembourg	3.83		5.25	4.60			7.00
Malaysia	4.50	4.50	4.00	5.33	4.00	3.67	5.00

Country	Capital Markets, Equity KE	Capital Markets, Bonds KB	Capital Markets, Advanced KA	International, General IG	International, FDI Flows IF	International, Portfolio Flows IP	Sovereign Debt Ratings S
Mauritius	3.17		3.00	5.50	4.00	2.33	5.00
Mexico	2.50	2.50	3.40	5.33	4.00	3.67	5.00
Moldova	3.25		4.33	4.00	6.00	3.00	2.00
Morocco	2.50			5.50	3.00	3.33	4.00
Netherlands	4.80	3.75	6.20	5.60	7.00	1.00	7.00
New Zealand	4.00	2.00	4.00	4.80	5.00	2.00	7.00
Nicaragua			2.00	5.00	7.00	3.00	3.00
Nigeria	1.25		2.50	5.75	4.00	3.00	
Norway	4.17	3.00	4.60	5.00	4.00	1.00	7.00
Pakistan	3.50			5.00	3.00	3.00	3.00
Panama	2.20		3.00	4.50	7.00	4.00	4.00
Paraguay	1.00		2.50	3.33	3.00	3.00	2.00
Peru	2.83	3.25	2.50	5.80	4.00	3.00	4.00
Philippines	2.67	3.00	3.80	4.33	3.00	4.33	4.00
Poland	3.00	2.00	4.60	5.67	5.00	4.00	5.50
Portugal	3.00	3.25	4.60	4.80	5.00	3.00	7.00
Romania	3.00		2.40	5.00	4.00	3.00	3.50
Russia	1.50	1.00	2.20	4.33	3.00	3.67	4.00
Saudi Arabia	2.00		2.00	3.67	2.00	5.00	5.00
Singapore	4.40	3.25	5.40	6.20	7.00	1.00	7.00
Slovak Republic	4.00		3.40	5.60	6.00	4.33	5.50
Slovenia	3.17		3.00	5.00	3.00	4.00	6.50
South Africa	3.83	3.25	3.60	5.33	4.00	5.00	5.00
South Korea	5.00	4.00	5.20	5.33	3.00	4.67	6.00
Spain	5.50	3.50	4.40	5.20	5.00	2.00	7.00
Sri Lanka	1.75		2.50	4.33	3.00	3.00	
Sweden	4.50	3.50	5.80	5.20	7.00	1.00	7.00
Switzerland	4.67	4.25	5.80	5.60	5.00	1.00	7.00
Taiwan	5.00		4.60	5.17			7.00
Thailand	4.00	2.25	3.80	4.83	4.00	4.00	5.00
Trinidad & Tobago	2.75		3.50	4.50		4.00	5.00
Tunisia	2.83		5.00	4.50	4.00	3.00	4.50
Turkey	3.50	5.00	2.67	4.83	3.00	4.00	3.50
Ukraine	1.80		1.50	4.60	3.00	3.33	3.00
United Kingdom	4.50	3.75	5.80	5.80	2.00	7.00	7.00
United States	5.17	5.00	6.20	5.80	2.00	5.00	7.00
Uruguay	1.00		3.00	4.25	3.00	3.67	2.50
Venezuela	2.33		1.75	4.80	4.00	3.00	2.00
Vietnam			1.67	4.20	5.00	3.00	4.00
Zimbabwe	2.20		3.50	3.25		3.00	

Black space = Data not available

ABOUT THE AUTHORS

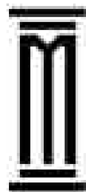
Glenn Yago is Director of Capital Studies at the Milken Institute. He specializes in financial innovations, financial institutions and capital markets, and has extensively analyzed public policy and its relation to high-yield markets, initial public offerings, industrial and transportation concerns, and public and private sector employment. Yago earned his Ph.D. at the University of Wisconsin, Madison.

Susanne Trimbath is a Research Economist at the Milken Institute and an experienced business professional with nearly 20 years in financial services, including operations management. Her research focuses on mergers and buyouts, real estate investments, and emerging capital markets. Trimbath holds an MBA in Management from Golden Gate University and earned her Ph.D. in Economics at New York University.

James Barth is the Lowder Eminent Scholar in Finance at Auburn University and a Senior Fellow at the Milken Institute. His research focuses on financial institutions and capital markets, both domestic and global, with special emphasis on regulatory issues. Barth earned his Ph.D. in economics at Ohio State University.

Don McCarthy is a Research Analyst at the Milken Institute. He works with Glenn Yago on developing metrics for measuring entrepreneurs' access to financial capital and on innovative funding solutions for environmental projects. McCarthy was educated at the London School of Economics and the University of Essex.

Triphon Phumiwasana is a Research Analyst at the Milken Institute where he focuses on banks and nonbank financial institutions, capital markets, banking regulation and economic development with special emphasis on global issues. Phumiwasana is a Ph.D. candidate in Economics at Claremont Graduate University.



MILKEN INSTITUTE

1250 Fourth Street • Santa Monica, California 90401
Phone (310) 570-4600 • Fax (310) 570-4601 • E-mail info@milkeninstitute.org
www.milkeninstitute.org