A comparison of purchasing power around the globe / 2006 edition

Prices and Earnings

Price comparison
Oslo, London and Copenhagen the most expensive cities

Wage comparison
Scandinavian and Swiss salaries the highest

Analysis
Income and leisure: two differently valued elements of prosperity

UBS

Cities (countries)

Amsterdam (Netherlands)
Athens (Greece)
Auckland (New Zealand)
Bangkok (Thailand)
Barcelona (Spain)
Beijing (China)
Berlin (Germany)
Bogotá (Colombia)
Bratislava (Slovakia)
Brussels (Belgium)
Bucharest (Romania)
Budapest (Hungary)
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Caracas (Venezuela)
Chicago (United States)
Copenhagen (Denmark)
Delhi (New Delhi, India)
Dubai (United Arab Emirates)
Dublin (Ireland)
Frankfurt (Germany)
Geneva (Switzerland)
Helsinki (Finland)
Hong Kong (China)
Istanbul (Turkey)
Jakarta (Indonesia)
Johannesburg (South Africa)
Kiev (Ukraine)
Kuala Lumpur (Malaysia)
Lima (Peru)
Lisbon (Portugal)
Ljubljana (Slovenia)
London (Great Britain)
Los Angeles (United States)
Luxembourg (Luxembourg)
Lyon (France)
Madrid (Spain)
Manama (Bahrain)
Manila (Philippines)
Mexico City (Mexico)
Miami (United States)
Milan (Italy)
Montreal (Canada)
Moscow (Russia)
Mumbai (Bombay, India)
Munich (Germany)
Nairobi (Kenya)
New York (United States)
Nicosia (Cyprus)
Oslo (Norway)
Paris (France)
Prague (Czech Republic)
Riga (Latvia)
Rio de Janeiro (Brazil)
Rome (Italy)
Santiago de Chile (Chile)
Sao Paulo (Brazil)
Seoul (South Korea)
Shanghai (China)
Singapore (Singapore)
Sofia (Bulgaria)
Stockholm (Sweden)
Sydney (Australia)
Taipei (Taiwan)
Tallinn (Estonia)
Tel Aviv (Israel)
Tokyo (Japan)
Toronto (Canada)
Vienna (Austria)
Vilnius (Lithuania)
Warsaw (Poland)
Zurich (Switzerland)

2006 edition

Prices and Earnings

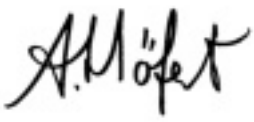
A comparison of purchasing power around the globe

Dear reader,

Why is a refrigerator relatively expensive in Nairobi? How much longer do people in the USA work as compared to Europeans? Even today, answering these kinds of questions with the help of the prices for 122 goods and services, and earnings data for 14 professions in 71 metropolises and economic centers around the globe, is a demanding and somewhat eccentric project. Thanks to the Internet, e-mail, an established network of contacts and UBS branch offices in almost all the world's larger cities, we at least can rely on efficient communications channels. It was a different world back in 1970, when the then-chief economist of UBS, after a trip to New York, came up with the idea of determining the "real" exchange rate for himself based on purchasing parity. In those days, all requests had to be sent by mail and it really could take several weeks for a questionnaire to make its way across the Atlantic. Phone calls and stamps were a hefty share of the budget. From this year's survey, we can see that telecommunication prices are continuing to drop around the world.

Even in a globalized world, price and wage comparisons are important, which is why you are now reading the thirteenth issue of "Prices and Earnings". Price comparisons are above all interesting to tourists and business travelers. Companies with subsidiaries or production sites abroad send qualified employees, expatriates, out from the parent company and they increasingly employ local specialists. They need a basis to determine their wages. There is a difference in many places between local market-driven wages and those adjusted for purchasing power. The level of earnings alone gives little indication of what those earnings can buy. This can only be seen after comparing purchasing power, a process which establishes a link between prices and earnings. There are limits to comparability, however. Prices often differ even within the city limits depending on location and conditions – but also based on the person surveying the prices. In emerging countries, expatriates are often confronted with far higher prices than locals – because they don't speak the language, don't know their way around the city or simply buy different things. We have tried to take all this into consideration, and to determine an average price level in each case by commissioning our survey from several independent – local as well as foreign – correspondents. Local UBS staff and independent organizations, including partner banks, chambers of commerce, universities, the student organization AIESEC and several private individuals gathered a total of over 30,000 data records. We extend our warm thanks to everyone who took part in the survey.

The remarkable consistency of "Prices and Earnings" over the last 36 years means we can now analyze data over time. In this year's issue we examine whether the convergence process has continued in an EU enlarged by ten new members. We also explore the hypothesis of the "hardworking American and the idle European." As a matter of fact, there do seem to be differences in the way the trade-off between more money and more leisure is valued on different sides of the Atlantic. New this year: Beijing, Delhi, Lyon and Munich have joined our urban universe.



Andreas Hoefert
Chief Global Economist

Simone Hofer
Editor-in-Chief

Prices and Earnings methodology

We conducted our standardized Prices and Earnings survey in 71 cities throughout the world between February and April 2006. In each city, surveys were conducted independently.

When interpreting the results, a number of factors should be considered. All price information gathered had to be converted into a universal currency, making such data subject to fluctuating exchange rates. To properly account for the effect of currency rate movements, the average exchange rates for individual currencies over the data collection period were applied. The exchange rates used are listed on page 12.

Composition of the reference basket

To perform a price comparison, it is necessary to define a standard basket of goods. The basket of goods used in our study is based on Western European consumer preferences and is weighted identically for all cities. It would be nearly impossible to take into differing regional consumer preferences, and this consideration should be kept in mind when evaluating results. It was also necessary to allow our local correspondents a certain amount of latitude in selecting products and services, even though individual items are delineated precisely.

The cost of living is calculated on the basis of a basket of goods containing 154 items involving 122 separate products and services. For apartment rents, pricing data for the expensive, medium and cheap categories was gathered. The weightings within the basket of goods were set so that when multiplied by the average prices for specific goods and services they approximate the monthly consumption of an average European family. Since the basket of goods we assembled only encompasses a limited selection of goods and services, however, we then weighted the individual product and service groups to correspond percentage-wise to the structure of the European consumer price index.

Even though the same basket of goods was used for all cities, price differences among cities result in the make-up of average expenditures. For example, rent expenses in most Asian cities are strikingly above those in our theoretical basket of goods, even though other expense categories tend to be below average there. Additionally, individual goods in different cities may vary substantially in quality and, with apartments, the attractiveness of the location. Furthermore, not everything in our basket of goods is available everywhere. To avoid skewing price levels when items were not available, the ratio of the price of other items in the basket to average prices was extrapolated.

Changing consumer preferences

The universal surveying of pricing data over time is a prerequisite for data comparability. The basket of goods used in the "Prices and Earnings" report has been largely unchanged over the last several years in its basic structure, with only minor adjustments necessary to reflect changing consumer lifestyles and preferences for goods and services. A sewing machine today no longer belongs in a modern (Western European) basket of goods, for example, whereas a PC most certainly does. In 2006, we expanded the services segment to include seven new items in the categories of education/training, recreation, sports and entertainment. The individual expense groups are now weighted in the basket of goods as follows:

Food/groceries	18%
Beverages/tobacco products	5%
Hygiene and healthcare	7%
Clothing	6%
Household and electronic devices	7%
Home	18%
Heating/lighting	5%
Transportation	14%
Miscellaneous services	20%

Occupations and incomes

The survey featured 120 questions on wages, payroll taxes and working hours for 14 separate occupations. To ensure data integrity and reflect a representative cross-section of workers in the industrial and service sectors, the occupations were selected with a view to being consistently definable and delimitable. The wage levels calculated represent an average which tends to somewhat underweight the service sector in Western industrialized countries. It must also be taken into consideration that the survey does not include self-employed or independent contractor occupations. The survey was conducted with a representative sample of companies, and occupational profiles were defined with maximum specificity (marital status, work experience, etc.). Unless otherwise specified, income data represents wages paid to domestic workers for the respective country. The weightings were structured so that each of the 14 occupations adds in roughly equal proportions to the computation of average income levels. See page 40–47 for detailed information on wages and working hours. ■

Overview

Thomas Flury, Simone Hofer, Georg Klein-Siebenbürgen

Prices

City[1]	Excl. rent New York = 100	Incl. rent New York = 100
Oslo	121.5	94.6
London	110.6	105.5
Copenhagen	109.2	86.3
Zurich	107.4	87.3
Tokyo	106.8	93.4
Geneva	102.9	85.8
New York	100.0	100.0
Dublin	98.3	84.3
Stockholm	98.1	75.8
Helsinki	97.0	77.3
Paris	95.6	78.1
Vienna	95.0	74.0
Luxembourg	93.3	76.6
Chicago	92.2	82.2
Los Angeles	91.6	80.6
Toronto	88.5	71.4
Brussels	88.4	68.5
Munich	88.4	71.2
Amsterdam	87.7	73.0
Montreal	87.5	71.2
Lyon	87.2	66.0
Miami	87.0	70.5
Frankfurt	86.9	69.3
Seoul	85.8	73.9
Milan	83.1	68.5
Berlin	82.3	64.4
Hong Kong	82.1	73.0
Barcelona	81.5	65.6
Rome	81.3	67.6
Sydney	80.4	69.0
Madrid	80.0	66.2
Singapore	76.6	62.9
Istanbul	76.3	61.6
Nicosia	74.7	66.2
Auckland	74.4	60.6
Dubai	74.0	66.1
Athens	73.0	57.4
Lisbon	72.3	62.1
Tel Aviv	69.2	55.2
Taipei	68.9	57.2
Moscow	65.6	56.8
Sao Paulo	65.1	53.6
Rio de Janeiro	64.8	55.1
Ljubljana	64.4	48.7
Manama	64.0	54.8
Warsaw	63.7	49.5
Caracas	63.4	52.8
Santiago de Chile	63.1	54.3
Tallinn	62.0	48.6
Mexico City	60.7	49.2
Johannesburg	59.7	47.2
Budapest	58.6	46.7
Bogotá	56.9	42.3
Bangkok	55.3	41.0
Prague	53.8	42.6
Riga	52.7	40.2
Jakarta	51.8	44.4
Bucharest	51.6	43.3
Bratislava	50.4	39.6
Shanghai	50.3	39.3
Sofia	50.1	40.0
Beijing	49.6	39.6
Vilnius	49.4	37.7
Lima	49.1	35.9
Nairobi	48.4	39.7
Kiev	47.8	40.6
Manila	46.7	35.2
Delhi	42.8	34.6
Buenos Aires	41.9	32.1
Mumbai	38.5	41.5
Kuala Lumpur	36.8	28.2

Methodology
The cost of a weighted shopping basket geared to Western European consumer habits containing 122 goods and services.

[1] Listed according to value of index (price level without rent).

Life is expensive in London, New York and Oslo

Oslo, London and Copenhagen are the three most expensive cities in our comparison of living costs in 71 metropolises. Including rent, which makes up around a fourth (housing and energy costs) of living expenses in a Western European household, London and New York are the most expensive places to live by a wide margin. It's no wonder that their residents often tolerate extreme commutes in order to find affordable housing. The cheapest cities we examined in our basket of 95 goods and 27 services – around a third less than the Western European average – were in Africa and Eastern Europe.

Prices vary within city limits as well

How is it possible that Hong Kong has slipped to the median price range in three years? And also the two other Chinese cities – Shanghai and Beijing – are no higher in the rankings than three years ago, either, despite the country's impressive economic growth. One reason for this is certainly that China won't subject its own currency to free market forces, since a revaluation of the renminbi could have a negative affect on the competitiveness of its export industry. Yet the price data from Hong Kong and Shanghai also show that the price of food, services and household goods can vary widely within city limits. Prices may differ depending on the part of town, but also on the person who collects the data. An Asian economics student "saved" around 10 percent compared to our local employees, and even more compared to European expatriates working in Hong Kong. There is more than one price level – this applies to most cities. Our shopping basket reflects the average consumption patterns of a average family living in the West. The effective cost of living in one city may vary considerable depending on the area, lifestyle or life cycle. ■

Earnings highest in Copenhagen, Oslo and Switzerland

In our international comparison, North American workers earn the highest wages, with workers in Western Europe close at their heels. In general, however, European net earnings are significantly below the disposable incomes levels enjoyed by Americans, due to higher taxes and social security contributions. One noteworthy exception to this trend is Ireland, which has relatively low payroll taxes. Less surprising is the fact that South Americans and Africans receive comparatively low compensation on average for the work they perform; pay in developing and emerging market countries is only a fraction of that in the industrialized nations.

The highest gross wages are paid in Scandinavia – Copenhagen and Oslo – followed by Switzerland, whose citizens also enjoy lower payroll tax deductions. Nowhere in the world do workers get more from their pay than in Zurich after mandatory deductions. But a net salary is not necessarily fully available for private consumption: there may be further "hidden" costs in our cities that are not covered by basic taxes and social contributions (see box on page 29). Within Europe alone there are dramatic differences in wage and salary levels. In Sofia, the capital of Bulgaria, wages are similar to those paid in India or Kenya. Wage inequalities between Eastern and Western Europe are a double-edged concern: workers from the East are moving to the West in search of higher pay, while new manufacturing capacity is being added in the East to take advantage of the much lower wages there.

Compared with the survey taken three years ago, little has changed among the top-ranked cities in terms of highest gross pay, except for the inclusion now of London among the world's Top Ten. The lowest average wages can still be found in Manila, Delhi, Mumbai, Jakarta and Bangkok. ■

Wage levels

City[1]	Gross New York = 100	Net New York = 100
Copenhagen	118.2	95.7
Oslo	117.0	110.8
Zurich	115.1	124.2
Geneva	111.0	115.4
New York	100.0	100.0
London	89.2	96.0
Chicago	88.3	94.7
Dublin	88.3	104.6
Frankfurt	87.6	85.5
Brussels	86.8	78.2
Los Angeles	86.3	97.0
Munich	84.9	84.5
Helsinki	84.9	89.1
Berlin	84.3	82.1
Luxembourg	84.0	98.1
Stockholm	80.7	77.0
Vienna	78.7	81.2
Tokyo	78.0	87.4
Amsterdam	77.0	72.7
Sydney	74.6	79.6
Toronto	74.2	80.4
Montreal	74.1	77.3
Lyon	69.0	70.5
Paris	68.5	68.8
Miami	67.6	74.0
Auckland	65.7	73.4
Barcelona	57.6	66.6
Milan	56.1	59.9
Nicosia	55.4	69.5
Madrid	53.9	64.3
Rome	47.0	49.7
Seoul	44.2	48.2
Athens	42.8	48.6
Dubai	40.6	57.8
Johannesburg	36.5	37.3
Taipei	35.5	43.3
Lisbon	33.2	38.6
Singapore	32.3	38.9
Ljubljana	31.3	28.3
Hong Kong	27.4	34.9
Manama	26.2	36.6
Istanbul	25.0	25.9
Sao Paulo	24.7	29.0
Prague	24.4	25.8
Santiago de Chile	21.2	24.3
Tallinn	20.5	22.1
Budapest	20.0	20.0
Moscow	19.9	25.4
Warsaw	19.3	18.4
Rio de Janeiro	18.6	21.2
Bratislava	16.6	18.7
Vilnius	15.9	15.4
Kuala Lumpur	15.7	18.8
Buenos Aires	15.4	18.0
Riga	14.4	15.3
Caracas	14.2	18.7
Lima	13.7	15.8
Bucharest	13.1	13.2
Shanghai	11.5	13.1
Mexico City	10.9	14.1
Bogotá	10.3	13.0
Kiev	9.6	11.6
Nairobi	9.3	11.1
Sofia	9.3	10.2
Beijing	8.9	10.9
Bangkok	8.1	10.9
Mumbai	7.0	8.7
Jakarta	6.3	8.2
Manila	6.3	7.8
Delhi	6.1	7.8
Tel Aviv	n.a.	n.a.

Methodology
Effective hourly wages for 14 professions, weighted according to distribution, net after deductions of taxes and social security contributions (see p. 26).

[1] Listed according to gross value of the index.

Domestic purchasing power

City[3]	Hourly pay[1] gross New York = 100	Hourly pay[1] net New York = 100	Annual income[2] net New York = 100
Zurich	107.1	115.6	114.1
Geneva	107.9	112.1	107.1
Dublin	89.8	106.5	99.9
Los Angeles	94.2	105.9	110.7
Luxembourg	90.0	105.1	89.1
Chicago	95.8	102.8	108.0
New York	100.0	100.0	100.0
Berlin	102.4	99.7	77.3
Sydney	92.8	99.0	88.5
Auckland	88.3	98.7	90.3
Frankfurt	100.8	98.5	87.1
Munich	96.1	95.5	86.2
Nicosia	74.1	93.0	86.5
Helsinki	87.5	91.8	78.4
Oslo	96.3	91.2	81.6
Toronto	83.9	90.9	87.4
Brussels	98.1	88.4	80.1
Montreal	84.7	88.4	85.9
Copenhagen	108.2	87.7	79.2
London	80.6	86.8	84.0
Vienna	82.9	85.5	76.3
Miami	77.7	85.1	84.0
Amsterdam	87.8	82.8	75.3
Tokyo	73.0	81.8	87.6
Barcelona	70.6	81.8	78.0
Lyon	79.1	80.8	68.3
Madrid	67.4	80.4	75.2
Stockholm	82.3	78.6	74.4
Dubai	55.0	78.2	65.5
Milan	67.5	72.1	67.0
Paris	71.7	72.0	58.4
Athens	58.7	66.6	60.7
Taipei	51.5	62.9	71.0
Johannesburg	61.1	62.4	63.6
Rome	58.1	61.5	59.5
Manama	41.0	57.2	56.3
Seoul	51.6	56.2	65.0
Lisbon	45.9	53.4	48.9
Kuala Lumpur	42.6	50.9	56.1
Singapore	42.1	50.8	54.9
Prague	45.3	48.0	46.3
Sao Paulo	37.9	44.5	41.3
Ljubljana	48.5	44.0	41.2
Buenos Aires	36.7	43.0	44.2
Hong Kong	33.3	42.5	50.5
Moscow	30.4	38.8	34.4
Santiago de Chile	33.7	38.5	42.9
Bratislava	32.8	37.0	35.5
Tallinn	33.2	35.6	33.7
Budapest	34.1	34.2	33.9
Istanbul	32.8	34.0	37.0
Rio de Janeiro	28.6	32.7	30.4
Lima	28.0	32.2	32.8
Vilnius	32.3	31.2	29.7
Caracas	22.4	29.6	28.2
Riga	27.3	29.0	27.4
Warsaw	30.4	28.8	27.1
Shanghai	22.9	26.0	26.7
Bucharest	25.3	25.6	24.2
Kiev	20.2	24.3	22.2
Mexico City	17.9	23.2	28.4
Nairobi	19.3	23.0	24.6
Bogotá	18.1	22.8	24.9
Mumbai	18.1	22.6	26.5
Beijing	18.0	22.0	23.8
Sofia	18.5	20.4	20.6
Bangkok	14.6	19.7	21.3
Delhi	14.4	18.3	20.3
Manila	13.5	16.6	18.3
Jakarta	12.2	15.8	16.4
Tel Aviv	n.a.	n.a.	n.a.

Note
When comparing purchasing power, it should be noted that local employers who would buy a different set of items in Asian or African cities than their counterparts in Europe or North America. Imported products are particularly important, since as they are not much cheaper in emerging countries than they are in Western Europe and North America.

Methodology
[1] Gross and/or net hourly wage divided by the cost of the entire basket of commodities excl. rent.

[2] Net annual income divided by the cost of the entire basket of commodities excl. rent.

[3] Listed according to the index value per net hourly wage.

n.a. = not available.

Purchasing power only slowly catching up

How much is a salary worth? An income figure alone gives no indication of how much it can buy. A worker in a Western European city can purchase our shopping basket approximately 13 times with his gross annual income. A mid-range annual salary in Eastern Europe or South America, however, is only enough for five baskets.

The most value is derived from the gross hourly wage – before taxes and social security contributions – in Copenhagen, Zurich, Geneva, Berlin and Frankfurt. Purchasing power in the emerging cities of Eastern Europe, Asia and South America, meanwhile, has not reached Western levels, in spite of high rates of economic growth in these regions. High economic growth rates reflect productivity improvements, and gains in labor productivity should – at least partially – be passed on to employees in the form of real earnings growth. In the present environment, it seems that the highly trained employees in Western cities were the main beneficiaries of the vigorous growth in the world economy over the last three years. In the newly industrialized countries, on the other hand, the growing supply of qualified jobs is still matched by an even greater demand. The emerging cities are growing quickly, but the flood of workers is keeping growth in wages in check for the time being. Purchasing power in the Asian cities looks slightly better when annual salaries are taken as a criterion instead of hourly wages. That's because low hourly rates can be offset at least partially by longer working hours (see our analysis of work and leisure time on page 36).

What's left after taxes is what counts

The ranking list takes another jolt when the buying power of net hourly wages is compared. With their high tax rates and social security contributions, Copenhagen and the German cities drop further back. After statutory deductions, people living in the Swiss cities, Dublin and Los Angeles have the most left over from their wages. However, it should be noted that benefits such as health insurance are not mandatory in all cities and is therefore not always included in the deductions for social services. Purchasing power in Asian and South American cities should also be effectively higher, since their residents tend to replace some of the items in our shopping basket, which is aligned to the habits of Western consumers, with less expensive local products and services. ■

35 minutes of work for a Big Mac

If the level of prices and wages were the same in all cities, and the production costs of a Big Mac, a kilo of rice or bread were the same everywhere, this comparison of purchasing power would make very dry reading. That's because everyone would have to work the same amount of time to earn the money to buy a Big Mac. This is, however, not the case. Our comparison shows that very different amounts of work are required around the world to earn the equivalent of one of these three products. On average, 35 working minutes are required for a Big Mac, 22 minutes for a kilo of bread and 16 minutes for a kilo of rice. The range is extensive, from just five minutes' work for a kilo of rice in London, Zurich and Sydney, to up to one and a half hours' of drudgery to buy a Big Mac with an average net hourly wage in Bogotá, Nairobi, Caracas and Jakarta. Compared to rice (and to the rest of the world), bread is expensive in Asia because it is not really counted as a staple food.

A clear picture of purchasing power

Based on price differences, economists derive what they call purchasing power parities for various currencies. They forecast what the foreign exchange rate would have to be for a product or a basket of products to cost the same in both countries. Because exchange rates sooner or later return to the relative level of purchasing power parity despite all fluctuations, this is a helpful tool for long-term currency predictions. By comparing the price of the product to the net wage, as in our comparison, the currency effects are factored out. Based on the example of a homogeneous product – a Big Mac in this case – real purchasing power differences can be depicted very clearly. This said, the two applications also ignore the fact that disproportionately high production costs may arise (work, agriculture, transport, etc.) before a product that looks and smells basically the same the world over can go over the counter. ■

Working time required to buy . . .

City	1 Big Mac in minutes	1kg of bread in minutes	1kg of rice in minutes
Amsterdam	19	10	9
Athens	26	10	20
Auckland	14	13	5
Bangkok	67	49	22
Barcelona	21	16	10
Beijing	44	42	29
Berlin	17	10	17
Bogotá	97	59	25
Bratislava	55	21	20
Brussels	20	12	12
Bucharest	69	31	25
Budapest	48	14	24
Buenos Aires	56	18	24
Caracas	85	76	13
Chicago	12	18	10
Copenhagen	18	12	6
Delhi	59	22	36
Dubai	25	11	12
Dublin	15	7	9
Frankfurt	16	9	17
Geneva	16	10	7
Helsinki	19	17	9
Hong Kong	17	26	11
Istanbul	48	14	36
Jakarta	86	47	36
Johannesburg	30	12	11
Kiev	55	19	21
Kuala Lumpur	33	21	9
Lima	86	37	19
Lisbon	32	20	10
Ljubljana	35	37	30
London	16	5	5
Los Angeles	11	18	10
Luxembourg	17	14	12
Lyon	24	15	15
Madrid	19	15	8
Manama	24	28	22
Manila	81	64	29
Mexico City	82	53	22
Miami	12	20	11
Milan	20	17	15
Montreal	17	17	9
Moscow	25	12	12
Mumbai	70	14	32
Munich	17	11	15
Nairobi	91	32	33
New York	13	16	8
Nicosia	19	9	8
Oslo	18	14	6
Paris	21	16	13
Prague	39	14	14
Riga	28	24	23
Rio de Janeiro	53	40	19
Rome	25	23	19
Santiago de Chile	56	32	21
Sao Paulo	38	30	11
Seoul	29	28	13
Shanghai	38	35	23
Singapore	22	26	10
Sofia	69	19	31
Stockholm	21	18	15
Sydney	14	15	5
Taipei	20	18	11
Tallinn	39	24	21
Tel Aviv	n.a.	n.a.	n.a.
Tokyo	10	16	12
Toronto	14	10	6
Vienna	16	13	10
Vilnius	43	18	24
Warsaw	43	17	18
Zurich	15	10	5

Methodology
Price of the product divided by the weighted net hourly wage in 14 professions.

n.a. = not available.

Exchange rates used[1]

City	Local currency (LC)		USD/LC	EUR/LC	CHF/LC
Amsterdam	EUR	1	1.206	1.000	1.562
Athens	EUR	1	1.206	1.000	1.562
Auckland	NZD	1	0.655	0.543	0.849
Bangkok	THB	1	0.026	0.021	0.033
Barcelona	EUR	1	1.206	1.000	1.562
Beijing	CNY	1	0.124	0.103	0.161
Berlin	EUR	1	1.206	1.000	1.562
Bogotá	COP	100	0.044	0.036	0.057
Bratislava	SKK	1	0.032	0.027	0.042
Brussels	EUR	1	1.206	1.000	1.562
Bucharest	RON	1	0.341	0.283	0.442
Budapest	HUF	100	0.470	0.390	0.609
Buenos Aires	ARS	1	0.332	0.275	0.429
Caracas	VEB	100	0.052	0.043	0.067
Chicago	USD	1	1.000	0.829	1.295
Copenhagen	DKK	1	0.162	0.134	0.209
Delhi	INR	1	0.022	0.019	0.029
Dubai	AED	1	0.273	0.226	0.353
Dublin	EUR	1	1.206	1.000	1.562
Frankfurt	EUR	1	1.206	1.000	1.562
Geneva	CHF	1	0.772	0.640	1.000
Helsinki	EUR	1	1.206	1.000	1.562
Hong Kong	HKD	1	0.129	0.107	0.167
Istanbul	TRL	1	0.749	0.621	0.970
Jakarta	IDR	100	0.011	0.009	0.014
Johannesburg	ZAR	1	0.163	0.135	0.211
Kiev	UAH	1	0.202	0.168	0.262
Kuala Lumpur	MYR	1	0.269	0.223	0.349
Lima	PEN	1	0.304	0.252	0.394
Lisbon	EUR	1	1.206	1.000	1.562
Ljubljana	SIT	100	0.504	0.417	0.652
London	GBP	1	1.754	1.454	2.271
Los Angeles	USD	1	1.000	0.829	1.295
Luxembourg	EUR	1	1.206	1.000	1.562
Lyon	EUR	1	1.206	1.000	1.562
Madrid	EUR	1	1.206	1.000	1.562
Manama	BHD	1	2.659	2.204	3.444
Manila	PHP	1	0.019	0.016	0.025
Mexico City	MXN	1	0.094	0.078	0.121
Miami	USD	1	1.000	0.829	1.295
Milan	EUR	1	1.206	1.000	1.562
Montreal	CAD	1	0.866	0.718	1.121
Moscow	RUB	1	0.036	0.030	0.046
Mumbai	INR	1	0.022	0.019	0.029
Munich	EUR	1	1.206	1.000	1.562
Nairobi	KES	1	0.014	0.012	0.018
New York	USD	1	1.000	0.829	1.295
Nicosia	CYP	1	2.099	1.740	2.718
Oslo	NOK	1	0.151	0.125	0.196
Paris	EUR	1	1.206	1.000	1.562
Prague	CZK	1	0.042	0.035	0.055
Riga	LVL	1	1.740	1.442	2.253
Rio de Janeiro	BRL	1	0.457	0.378	0.591
Rome	EUR	1	1.206	1.000	1.562
Santiago de Chile	CLP	100	0.191	0.158	0.247
Sao Paulo	BRL	1	0.457	0.378	0.591
Seoul	KRW	100	0.103	0.085	0.133
Shanghai	CNY	1	0.124	0.103	0.161
Singapore	SGD	1	0.616	0.511	0.798
Sofia	BGL	1	0.619	0.513	0.802
Stockholm	SEK	1	0.129	0.107	0.167
Sydney	AUD	1	0.738	0.611	0.955
Taipei	TWD	1	0.031	0.026	0.040
Tallinn	EEK	1	0.077	0.064	0.100
Tel Aviv	ILS	1	0.215	0.178	0.278
Tokyo	JPY	1	0.009	0.007	0.011
Toronto	CAD	1	0.866	0.718	1.121
Vienna	EUR	1	1.206	1.000	1.562
Vilnius	LTL	1	0.350	0.290	0.453
Warsaw	PLN	1	0.313	0.260	0.406
Zurich	CHF	1	0.772	0.640	1.000

Source: Datastream, International Monetary Fund, Oanda.

[1] Average exchange rates January–April 2006.

Realignment of currency blocs

Foreign exchange fluctuations have a strong influence on the results of our comparison of prices and wages over time. In fact, the shifts in rankings are ofter the result of changes in the foreign exchange framework. A new trend is observable: some countries experienced considerable revaluation against the US dollar, while a series of states with formerly volatile currencies were able to enter a period of stable currency rates against the greenback. The latter now form a new dollar bloc, which diverges greatly from the one traditionally prevailing among Commonwealth members.

Noticeable is that among the 30 currencies we surveyed, only the Venezuelan bolivar has lost value against the US dollar since 2003 (see also page 48). With an exchange loss of 17%, Venezuela is the typical exception in a set of statistics that otherwise presents a very uniform picture. Latin America is the region with the biggest gainers from the currency valuation. At the top of the plus side are the Brazilian real (+60%), the Chilean peso (+40%) and the Colombian peso (+29%). A stable exchange rate to the dollar has been achieved in Mexico, which is tied to the USA through a free-trade zone, as well as in Argentina and Peru. This stability against the dollar is a result of efforts by these governments to promote their own economies, and these countries can now be seen as part of the newly defined US dollar bloc.

The currencies in the traditional dollar bloc, meanwhile, have increased markedly in value: Canadian dollar +31%, Australian dollar +24%, New Zealand dollar +19% and South African rand +36%. These movements are in contrast to their habitual association with the dollar. If stability of currency relations is taken as the measure, the Pacific states belong more to Asia than to the dollar bloc. China, Japan, Singapore and Hong Kong are just a few of the countries in the region able to achieve a stable exchange rate to the greenback. Oil producers in the Middle East have had a stable relation to the dollar for many years.

Europe has demonstrated independence from its transatlantic partner in the same period by achieving a 12% gain in the exchange rate against the dollar. The euro's development is somewhere midway between the exchange winners and the new virtual dollar bloc. The new economies of central Europe are following the trend in core Europe, with every indication suggesting that a new euro bloc is in the making here. ■

Price comparison

Christian Frey, Dorothea Fröhlich, Oliver Futterknecht,
Simone Hofer, Karin Schefer

Total expenditure on goods and services

City	USD	Index New York = 100
Amsterdam	2202	87.7
Athens	1833	73.0
Auckland	1867	74.4
Bangkok	1387	55.3
Barcelona	2045	81.5
Beijing	1245	49.6
Berlin	2067	82.3
Bogotá	1430	57.0
Bratislava	1266	50.4
Brussels	2220	88.4
Bucharest	1296	51.6
Budapest	1471	58.6
Buenos Aires	1051	41.9
Caracas	1591	63.4
Chicago	2314	92.2
Copenhagen	2740	109.2
Delhi	1074	42.8
Dubai	1857	74.0
Dublin	2467	98.3
Frankfurt	2180	86.9
Geneva	2584	102.9
Helsinki	2435	97.0
Hong Kong	2061	82.1
Istanbul	1915	76.3
Jakarta	1300	51.8
Johannesburg	1500	59.7
Kiev	1200	47.8
Kuala Lumpur	925	36.8
Lima	1233	49.1
Lisbon	1815	72.3
Ljubljana	1617	64.4
London	2776	110.6
Los Angeles	2298	91.6
Luxembourg	2342	93.3
Lyon	2189	87.2
Madrid	2008	80.0
Manama	1608	64.0
Manila	1172	46.7
Mexico City	1523	60.7
Miami	2183	87.0
Milan	2085	83.1
Montreal	2229	88.8
Moscow	1647	65.6
Mumbai	967	38.5
Munich	2220	88.4
Nairobi	1216	48.4
New York	2510	100.0
Nicosia	1876	74.7
Oslo	3049	121.5
Paris	2400	95.6
Prague	1349	53.8
Riga	1324	52.7
Rio de Janeiro	1627	64.8
Rome	2042	81.3
Santiago de Chile	1584	63.1
Sao Paulo	1635	65.1
Seoul	2153	85.8
Shanghai	1262	50.3
Singapore	1924	76.6
Sofia	1259	50.1
Stockholm	2461	98.0
Sydney	2018	80.4
Taipei	1730	68.9
Tallinn	1556	62.0
Tel Aviv	1738	69.2
Tokyo	2682	106.9
Toronto	2221	88.5
Vienna	2384	95.0
Vilnius	1239	49.4
Warsaw	1598	63.7
Zurich	2697	107.4

Methodology
The cost of a weighted shopping basket of goods geared to Western European consumer habits, containing 122 goods and services.

Different price gaps for different product groups

Our cost-of-living basket costs an average of USD 2300 in Western European and North American cities, over 40% more expensive than in the cities we surveyed in Eastern Europe and Africa. Depending on the product group, the price spread between the most expensive and the cheapest region or city varies considerably. Labor-intensive services are particularly expensive in Western Europe and North America because of their higher wages, while electronics and household appliances are very expensive in developing countries in relation to overall price levels.

Large price differences for services

According to economic theory, price differences between internationally marketed goods such as electronic devices, nonperishable foodstuffs and clothes should be less than between nontraded goods and services. A haircut or a taxi trip are examples of local services. Our survey reveals that the price difference for the use of urban transportation (bus, taxi, train) between the cheapest (South America and Eastern Europe) and the most expensive regions (Western Europe) is around 70%. This is far more than for household and electronic appliances, with a price gap of just 23%. It should be noted, though, that thanks to today's transport options and above all the Internet, only a few goods and ever fewer services are closed to international trade. For example, the EU internal market has resulted in certain local services casting off their local shackles and marketing themselves across the union. Both the service providers – dentists, for example – and their customers have in general become more mobile. Opening the services market across national borders could well foster greater price convergence (see article on page 32). ■

Food costs the most in Tokyo

Cultural and climatic conditions create wide differences in eating habits across regions. Price comparisons are thus often of only limited value, since certain products are not available everywhere. For our analysis, we put together a basket of 39 foodstuffs based mainly on Western European buying habits, in which especially important staple foods are given more prominence. The average cost of the basket in all cities is USD 479. At USD 723, the basket in Tokyo is clearly the most expensive, while in Mumbai it costs the least, at USD 174. Right at the top of the rankings, along with Seoul and Oslo, are the Swiss cities. Zurich and Geneva are on average 53% more expensive than the EU cities we analyzed.

What's conspicuous is how starkly food prices differ within regions themselves. Asia, for example, where the price level of all metropolises at USD 372 is relatively close to the global average, is home to both Tokyo and Mumbai at both ends of the scale. And although Europe is becoming increasingly integrated, the price gap for food between East and West has a factor of two; between Oslo USD 623 and Vilnius USD 218 nearly three. The countries of the North American Free Trade Agreement present the most uniform picture, but also the highest prices, at an average of USD 529. ■

Food prices

City	USD[1]	Index New York = 100
Amsterdam	427	76.9
Athens	396	71.3
Auckland	388	69.8
Bangkok	340	61.2
Barcelona	444	80.0
Beijing	281	50.6
Berlin	420	75.7
Bogotá	268	48.2
Bratislava	251	45.2
Brussels	462	83.1
Bucharest	290	52.2
Budapest	264	47.5
Buenos Aires	213	38.3
Caracas	370	66.6
Chicago	551	99.3
Copenhagen	552	99.5
Delhi	195	35.1
Dubai	392	70.7
Dublin	481	86.6
Frankfurt	427	76.8
Geneva	619	111.5
Helsinki	454	81.8
Hong Kong	481	86.6
Istanbul	407	73.3
Jakarta	345	62.1
Johannesburg	321	57.9
Kiev	223	40.1
Kuala Lumpur	182	32.8
Lima	253	45.6
Lisbon	411	74.0
Ljubljana	354	63.8
London	473	85.3
Los Angeles	597	107.6
Luxembourg	576	103.7
Lyon	430	77.4
Madrid	434	78.1
Manama	370	66.7
Manila	247	44.5
Mexico City	313	56.4
Miami	530	95.4
Milan	475	85.6
Montreal	481	86.6
Moscow	336	60.4
Mumbai	174	31.3
Munich	419	75.4
Nairobi	305	54.9
New York	555	100.0
Nicosia	383	68.9
Oslo	623	112.1
Paris	532	95.9
Prague	270	48.7
Riga	253	45.6
Rio de Janeiro	294	53.0
Rome	488	87.8
Santiago de Chile	333	60.0
Sao Paulo	308	55.4
Seoul	627	112.9
Shanghai	274	49.4
Singapore	492	88.7
Sofia	248	44.6
Stockholm	479	86.3
Sydney	420	75.6
Taipei	479	86.2
Tallinn	309	55.6
Tel Aviv	328	59.1
Tokyo	723	130.3
Toronto	449	80.8
Vienna	517	93.0
Vilnius	218	39.3
Warsaw	271	48.8
Zurich	642	115.6

Methodology
Cost of a weighted basket of goods with 39 foodstuffs.

[1] Monthly expenditure of average western family.

Prices of woman's and men's clothing

City[1]	Women's clothing[1] USD	Men's clothing[2] USD	Index New York = 100
Amsterdam	560	950	94.4
Athens	520	770	80.6
Auckland	470	650	70.0
Bangkok	250	550	50.0
Barcelona	530	790	82.5
Beijing	370	550	57.5
Berlin	600	770	85.6
Bogotá	420	480	56.3
Bratislava	240	310	34.4
Brussels	730	750	92.5
Bucharest	260	470	45.6
Budapest	460	670	70.6
Buenos Aires	190	350	33.8
Caracas	310	460	48.1
Chicago	720	710	89.4
Copenhagen	800	770	98.1
Delhi	260	440	43.8
Dubai	400	660	66.3
Dublin	650	910	97.5
Frankfurt	660	920	98.8
Geneva	770	920	105.6
Helsinki	760	930	105.6
Hong Kong	460	740	75.0
Istanbul	490	730	76.3
Jakarta	260	390	40.6
Johannesburg	270	370	40.0
Kiev	300	340	40.0
Kuala Lumpur	170	250	26.3
Lima	230	370	37.5
Lisbon	560	740	81.3
Ljubljana	420	580	62.5
London	640	790	89.4
Los Angeles	720	850	98.1
Luxembourg	690	740	89.4
Lyon	570	820	86.9
Madrid	560	750	81.9
Manama	550	620	73.1
Manila	100	170	16.9
Mexico City	350	450	50.0
Miami	650	860	94.4
Milan	690	890	98.8
Montreal	600	810	88.1
Moscow	550	690	77.5
Mumbai	210	370	36.3
Munich	630	840	91.9
Nairobi	250	350	37.5
New York	740	860	100.0
Nicosia	480	650	70.6
Oslo	740	1090	114.4
Paris	660	1000	103.8
Prague	440	560	62.5
Riga	330	540	54.4
Rio de Janeiro	520	570	68.1
Rome	630	770	87.5
Santiago de Chile	400	600	62.5
Sao Paulo	440	490	58.1
Seoul	800	840	102.5
Shanghai	320	530	53.1
Singapore	390	600	61.9
Sofia	260	400	41.3
Stockholm	720	840	97.5
Sydney	620	740	85.0
Taipei	570	740	81.9
Tallinn	480	600	67.5
Tel Aviv	440	570	63.1
Tokyo	1050	1320	148.1
Toronto	520	660	73.8
Vienna	800	960	110.0
Vilnius	420	530	59.4
Warsaw	440	630	66.9
Zurich	800	1050	115.6

Methodology
Prices are based on purchases of good-quality clothing in department stores, not specialized shops or fashion boutiques.

[1] Complete ladies' outfit, consisting of suit, blazer/jacket, summer dress, pantyhose and a pair of shoes.

[2] Complete men's wardrobe, comprising a suit, blazer/jacket, shirt, jeans, socks and a pair of shoes.

Manila's the place for clothes

Nowhere are gaps in global prices clearer than in clothing. A complete set of mens' clothes of medium quality is eight times more expensive in Tokyo than it is in Manila; the same outfit for a lady costs eleven times as much. The global average for a complete get-up is USD 505 for women and USD 668 for men. This difference is based at least in part on the clothes selected. Copenhagen and Chicago alone depart from the sex-based rule, since men pay somewhat less there. In Bangkok, however, they have to shell out more than twice what their female counterparts do. All in all, the Western European and North American cities represent the most expensive region.

If price levels are equated with quality, sophisticated couples often have to part company when it comes to buying clothes. Copenhagen and Seoul are right behind Tokyo as the most expensive destinations for women's clothes, but only occupy the upper midrange when it comes to men's clothing. The inverse is true of Oslo, Paris and Amsterdam. Both men's and women's clothing are disproportionately expensive in Zurich, Geneva and Vienna. Couples who would rather shop together and do so cheaply can choose between Manila, Kuala Lumpur, Buenos Aires and Bratislava. Prices are based on purchases of good-quality clothing in department stores, not fashion boutiques or expensive brand names. Prices of the latter would likely vary less among the cities and could even be expensive in the now cheapest destinations, where the respective name tag would be considered a luxury good. ■

Narrow price margin for home electronics

A basket of household appliances and home electronics costs USD 2554 in our average global city. Vienna, at USD 3280, and Kuala Lumpur, at USD 1680, represent the two extremes of the price spectrum. It's less the names of these cities that's surprising (although Vienna is in a modest 12th place in the comparison of all goods and services), but rather the low difference in prices relatively between the cheapest and most expensive metropolises. That's only logical, though, when you consider that a product in countries with a high general price level is seen as nothing special and is therefore relatively affordable, while in other localities it takes on downright luxury status. The basket of appliances in Kuala Lumpur, for example, would take 463 hours of work to buy, while in Vienna it would require just 183 hours. From this perspective, these goods are even less affordable for local workers in Manila and Jakarta. Western shoppers, on the other hand, can pick up goods cheaply in Kuala Lumpur, Manama, Dubai and Kiev.

Household appliances and home electronics in the U.S. cities are not only a relatively good value, but also come out on top in terms of absolute value. As a region, North America actually occupies the cheapest position at an average of USD 2205. This may have a lot to do with the dimensions and homogeneity of the market, but also with the fact that market penetration of these devices is most advanced there. Western Europe, where prices are highest for our basket, at USD 2875, seems to have some catching up to do. ■

Prices of home electronics and household appliances

City	USD	Index New York = 100
Amsterdam	3000	142.2
Athens	2920	138.4
Auckland	2660	126.1
Bangkok	2060	97.6
Barcelona	2960	140.3
Beijing	2350	111.4
Berlin	2470	117.1
Bogotá	2270	107.6
Bratislava	2310	109.5
Brussels	2880	136.5
Bucharest	2250	106.6
Budapest	2420	114.7
Buenos Aires	2160	102.4
Caracas	2300	109.0
Chicago	2040	96.7
Copenhagen	2950	139.8
Delhi	2140	101.4
Dubai	1810	85.8
Dublin	2690	127.5
Frankfurt	2670	126.5
Geneva	3170	150.2
Helsinki	3010	142.7
Hong Kong	2500	118.5
Istanbul	2880	136.5
Jakarta	2290	108.5
Johannesburg	2700	128.0
Kiev	1860	88.2
Kuala Lumpur	1680	79.6
Lima	1970	93.4
Lisbon	2500	118.5
Ljubljana	2550	120.9
London	2970	140.8
Los Angeles	2010	95.3
Luxembourg	2970	140.8
Lyon	3040	144.1
Madrid	2810	133.2
Manama	1820	86.3
Manila	2340	110.9
Mexico City	2740	129.9
Miami	2000	94.8
Milan	2600	123.2
Montreal	2560	121.3
Moscow	2710	128.4
Mumbai	2130	100.9
Munich	2590	122.7
Nairobi	2950	139.8
New York	2110	100.0
Nicosia	2770	131.3
Oslo	3140	148.8
Paris	3000	142.2
Prague	2470	117.1
Riga	2400	113.7
Rio de Janeiro	2640	125.1
Rome	2740	129.9
Santiago de Chile	2580	122.3
Sao Paulo	2580	122.3
Seoul	2650	125.6
Shanghai	2250	106.6
Singapore	2800	132.7
Sofia	2490	118.0
Stockholm	2710	128.4
Sydney	2590	122.7
Taipei	2260	107.1
Tallinn	2570	121.8
Tel Aviv	3200	151.7
Tokyo	3250	154.0
Toronto	2510	119.0
Vienna	3280	155.5
Vilnius	2160	102.4
Warsaw	2460	116.6
Zurich	3050	144.5

Methodology
Costs for a basket of items consisting of: refrigerator, color TV, digital camera, electric steam iron, vacuum cleaner, frying pan, hairdryer and PC.

Apartment rents

	Furnished 4-room apartment[1] price range			Unfurnished 3-room apartment[2] price range			Normal local rent[3]
	expensive	medium	cheap	expensive	medium	cheap	medium
City	USD	USD	USD	USD	USD	USD	USD
Amsterdam	4520	2470	1030	2770	1570	660	1210
Athens	2560	1570	1210	980	790	650	710
Auckland	2100	1440	1180	1700	1050	790	1050
Bangkok	880	740	590	620	520	410	270
Barcelona	1970	1610	1270	1230	1090	880	1030
Beijing	3850	1360	870	2980	950	540	400
Berlin	2170	1810	1100	1720	870	540	750
Bogotá	2040	960	400	940	550	300	240
Bratislava	1280	790	580	950	590	470	550
Brussels	2930	1930	1590	1830	1300	860	600
Bucharest	2670	1580	1090	1820	1210	790	670
Budapest	2860	1870	1280	1380	1050	740	410
Buenos Aires	1530	1020	710	660	500	330	230
Caracas	3020	1980	1200	2080	1350	780	780
Chicago	4950	3450	1900	3100	1750	1120	1930
Copenhagen	3150	2440	1740	2620	1670	1210	990
Delhi	1700	990	700	1570	540	170	540
Dubai	4370	2900	1420	2100	1640	1200	1480
Dublin	4920	3020	2160	3080	2430	1920	1540
Frankfurt	2570	1910	1530	2000	1360	970	900
Geneva	3910	2680	2370	1930	1360	1090	1620
Helsinki	4250	3260	2410	1480	1180	840	780
Hong Kong	7480	4350	2870	5740	3930	2260	770
Istanbul	3950	2650	1890	2000	1390	810	610
Jakarta	2500	2840	1030	1120	710	540	640
Johannesburg	1880	1070	550	1030	800	600	640
Kiev	3030	2430	1620	1310	910	760	510
Kuala Lumpur	1350	810	400	480	270	180	270
Lima	1310	840	490	650	290	180	150
Lisbon	2650	2090	1490	1790	1330	920	1290
Ljubljana	1530	1150	760	1010	800	610	350
London	9960	6240	2390	6180	4170	1710	2390
Los Angeles	5740	4200	3290	3420	2400	1690	1390
Luxembourg	2680	2120	1190	2180	1720	1230	1230
Lyon	n.a.	900	690	n.a.	780	600	730
Madrid	2730	1890	1450	2290	1460	1010	1130
Manama	3990	2260	1730	2130	1460	1330	930
Manila	1790	1160	730	820	480	240	180
Mexico City	2340	1190	620	1560	860	380	810
Miami	2700	2200	1000	2000	1200	690	1050
Milan	3500	2700	2210	1540	1170	1000	1030
Montreal	1880	1560	1300	1660	1440	1020	1200
Moscow	3740	2090	1300	2800	1380	810	1150
Mumbai	4500	4070	1870	2740	1980	1270	1000
Munich	3500	2370	1620	1980	1410	1070	910
Nairobi	3070	1960	1330	1400	730	490	450
New York	11100	7380	4370	5870	3660	2530	2500
Nicosia	3150	2520	1780	1680	1360	1050	1570
Oslo	3590	2610	1910	2120	1620	1320	960
Paris	3510	2450	1890	2200	1800	1200	1120
Prague	1500	1180	820	1250	950	570	490
Riga	2260	1390	870	1740	870	520	170
Rio de Janeiro	5080	2700	1500	2410	1640	1150	750
Rome	3130	1750	1420	2200	1450	1010	1250
Santiago de Chile	5530	3430	1520	3530	2050	910	520
Sao Paulo	4390	3010	2100	1720	900	610	570
Seoul	7000	4330	2580	4120	3510	2520	620
Shanghai	2430	1210	730	1210	780	550	360
Singapore	2480	1910	1520	1980	1330	1160	990
Sofia	1840	1270	910	820	590	520	520
Stockholm	2360	1520	1150	1600	1040	960	890
Sydney	6640	3870	2210	3170	2100	1360	880
Taipei	2050	1680	1240	1590	1500	930	930
Tallinn	2700	1770	1200	1350	580	310	500
Tel Aviv	2580	1720	860	1720	1290	860	600
Tokyo	10260	7270	5130	4270	1710	850	1200
Toronto	2080	1730	1440	1730	1300	970	1120
Vienna	2460	1790	1400	1830	1360	1010	800
Vilnius	1750	1100	590	790	490	350	300
Warsaw	1890	1220	820	1230	730	510	560
Zurich	3240	2550	1800	1620	1230	1030	1430

Methodology
Average cost of housing (excluding extremes) per month, which an apartment-seeker would expect to pay on the free market at the time of the survey.

[1] Rents are based on apartments built after 1980 (4 rooms, kitchen, bathroom; with garage) including all incidental costs, the level of housing comfort conforms to the expectations of salaried mid-management employees in areas favored by them.

[2] Rents are based on apartments built after 1980 (3 rooms, kitchen, bathroom, without garage; including incidental expenses) with an average comfort customary in the locality and near the city center.

[3] The figures given are merely tentative values for average rent prices (monthly gross rents) for a majority of local households.

n.a. = not available.

Big price gap for rents
Housing markets are extremely fragmented in all cities. In order to provide a representative value for living costs in our cost-of-living basket, data for three distinct housing categories were collected: furnished four-room dwellings for Western executives, unfurnished three-room dwellings in mid-range residential areas, and typical city apartments in terms of standard, size and location. Rental prices include all incidental costs like e.g. maintenance, but exclude electricity and heating. While asking prices were assessed for the first two segments, the last category consists of actual rental prices. This takes into account the fact that rents for dwellings that have been rented for a long time may vary substantially from current market value. Established residents are almost exclusively the beneficiaries from this phenomenon; foreigners or newly arriving locals must pay current market prices. The overall price index weights rents of local housing stock two-thirds higher than rents for dwellings following Western standards.

Furnished four-room apartment
Aside from luxury apartments in New York, London and Tokyo, Western comfort in a top locality costs on the average slightly more than USD 1800. The price differences, however, are substantial, and can apply to rents within a single city as well. These inconsistencies can reflect location factors, such as centrality, view and existing infrastructure in the area, as well as residence-specific services such as security, on-site service personnel or interior furnishings. Although our questionnaire requested data of the greatest possible accuracy, subjective perceptions always play a role in the prices seen in this category. A direct comparison is thus not given, and price differences reflect differences in the real or perceived quality of the dwelling as well.

Three-room apartment
The picture is similar in the category of unfurnished three-room dwellings: Large variations in prices are the norm, both regionally and within a given city. The most expensive cities are New York and London, followed by Hong Kong. Dwellings of this category in Eastern Europe and South America are relatively cheap. Compared to the global average, just over USD 1200, our three-room apartment rents for just USD 840 in Eastern Europe and USD 1000 in South America.

Locally prevailing rent costs
The general level of local rent should reflect what an average resident family spends per month on accommodation. It is a benchmark for dwellings typical of the city in question in terms of size, standard of construction and living area. The comparison of market rents for unfurnished 3-room dwellings at the local customary monthly rent gives an indication of the extent of deviation between rents for foreign tenants and the "local" market. While rents for existing units in this category are slightly cheaper than the market rent of a centrally located 3-room dwelling in Europe and North America, a typical resident of a South American city pays just under half this price. In Asia rents are no less than 40% cheaper. Given that the journey from an average local dwelling to the center of a metropolis can often take up to an hour, however, and taking into consideration the local buying power, people in developing countries frequently settle for smaller apartments.

An international comparison in this category is also complicated by local, often very different restrictions on rents. These laws can determine trends in rent prices, as well as the people eligible as tenants. For example, in Switzerland, existing tenancy agreements may only be modified in relation to the interest rate of variable mortgages. In addition, subsidized apartments and houses may be unavailable to foreigners in some areas. There are frequently hindrances at the informal level, too, whether caused by an inability to communicate in the local language, making it impossible to obtain the necessary forms, or the scarcity of official brokers for this segment. The ratio of subsidized and cooperative housing is another factor influencing average local prices, and varies enormously from city to city. ■

Public transport

City	Bus, tram or Metro[1] USD	Taxi[2] USD	Train[3] USD
Amsterdam	2.6	17.2	31.2
Athens	0.7	3.3	11.5
Auckland	2.3	7.2	38.6
Bangkok	0.5	1.7	6.2
Barcelona	1.3	13.0	18.5
Beijing	0.4	1.7	6.5
Berlin	2.5	13.3	45.2
Bogotá	0.5	1.9	n.a.
Bratislava	0.6	3.9	8.2
Brussels	1.8	14.2	21.2
Bucharest	0.3	2.7	n.a.
Budapest	0.9	7.5	9.6
Buenos Aires	0.2	2.6	7.1
Caracas	0.4	4.2	n.a.
Chicago	2.0	9.9	32.4
Copenhagen	2.9	12.6	35.1
Delhi	0.2	0.9	5.7
Dubai	0.8	5.2	n.a.
Dublin	1.6	10.4	40.0
Frankfurt	3.4	13.0	44.8
Geneva	2.2	16.5	41.4
Helsinki	2.5	6.2	34.9
Hong Kong	0.8	16.1	5.4
Istanbul	0.9	6.3	18.0
Jakarta	0.3	2.2	7.9
Johannesburg	1.2	10.0	8.5
Kiev	0.3	4.0	2.7
Kuala Lumpur	0.5	1.6	5.4
Lima	0.5	1.3	18.6
Lisbon	1.1	8.7	18.6
Ljubljana	1.0	6.2	15.1
London	2.6	20.3	91.2
Los Angeles	1.5	11.8	22.0
Luxembourg	1.5	15.4	38.1
Lyon	2.1	19.7	34.4
Madrid	1.4	8.6	16.7
Manama	0.3	6.6	n.a.
Manila	0.2	1.5	3.6
Mexico City	0.3	1.9	n.a.
Miami	1.3	9.3	27.8
Milan	1.2	9.7	16.3
Montreal	2.2	9.0	47.0
Moscow	0.3	5.4	3.1
Mumbai	0.3	1.1	5.6
Munich	3.2	9.9	45.2
Nairobi	0.5	5.6	14.1
New York	2.0	11.6	52.5
Nicosia	1.0	6.3	n.a.
Oslo	3.8	16.3	36.2
Paris	1.7	15.6	37.0
Prague	0.8	6.0	6.7
Riga	0.4	2.9	5.9
Rio de Janeiro	0.8	6.1	n.a.
Rome	1.2	11.4	23.0
Santiago de Chile	0.7	7.0	11.7
Sao Paulo	0.9	9.1	n.a.
Seoul	0.8	2.0	5.5
Shanghai	0.5	1.6	6.2
Singapore	1.0	6.2	n.a.
Sofia	0.3	2.9	6.3
Stockholm	4.5	17.0	25.9
Sydney	2.8	12.4	21.5
Taipei	0.7	5.0	12.0
Tallinn	1.2	5.8	6.9
Tel Aviv	1.1	6.5	5.4
Tokyo	2.0	13.2	27.9
Toronto	2.4	8.2	45.4
Vienna	2.0	12.5	34.3
Vilnius	0.4	4.7	10.5
Warsaw	0.8	5.1	12.2
Zurich	2.7	21.2	44.8

[1] Price of a single ticket for the public transport network (bus, streetcar or metro) for a journey of approx. 10 km/6 miles or at least 10 stops.

[2] Price of a ticket for 5 km/3 miles within the city limits, incl. service.

[3] Price of a single ticket (2nd class) for a train journey of 200 km.

n.a. = not available.

Wide spreads in public transport

Public transport is most expensive in Western Europe, North America and Oceania, and cheapest in South America. Fares vary profoundly worldwide, regardless of the type of transport (bus, tram, subway, taxi or train), with prices deviating on average 70% from the global mean.

For instance, a second class one-way ticket for a 200 km rail journey in North America (USD 41) is approximately eight times the tariff in South America (USD 4.7). A comparison between single cities shows even larger differences. The average cost for this journey in the 71 cities that make up our survey was USD 22. The USD 91 charged in London, by far the most expensive city, is roughly 65% higher than the fare in the second most costly city New York (USD 52) and about four times the global average. The cheapest city in our survey is Kiev, where the journey cost only USD 2.70, or a ninth of the global average fare.

The international average price for a journey of 10 km, or ten stops on a bus, tram or urban rail system, was USD 1.30. Here as well, considerable differences emerged between the regions. While the journey costs a mere USD 0.50 to 0.70 in South America, Eastern Europe or Asia, in Oceania the rate is four times as much (USD 2.50). All 27 cities with above-average fares are in advanced economies, headed by Stockholm and Oslo, where prices exceed USD 3.50.

Large discrepancies were also seen in taxi prices among the cities in our survey. The global average of a 5 km daytime taxi trip within the city was USD 8, while Zurich topped the table at USD 21 and Delhi brought up the rear at a mere USD 0.90. If we ignore the extreme cases, most cities of our sample are spread in the broad range between USD 4 to USD 15. At a regional level, North America (USD 10.60) constituted the upper end, while South America and Asia (USD 4.20 each) represent the lower limit.

Ownership might affect prices

Public transport refers to transport that is available to the public. The term also commonly implies state ownership and operation of the system, but this is not always the case. Many cities have privatized their transport systems partially or wholly. While competition may assure price levels in line with local buying power, international arbitrage is only possible to a limited extent: the service has to be consumed locally and cannot be traded; and providers depend on local productivity factors, especially for the labor-intensive operation and maintenance of the system. ■

Car prices and maintenance costs

City	Mid-price car	Price[1] USD	Tax[2] USD	Fuel[3] USD
Amsterdam	VW Golf Comfortline 2.0 FSI	31,843	362	1.72
Athens	VW Passat 2.0 2005	33,538	449	1.16
Auckland	Toyota Corolla GL1.8	19,651	131	1.02
Bangkok	Toyota Corolla 1.8	22,460	46	0.69
Barcelona	Seat Ibiza	25,407	82	1.27
Beijing	Hyundai Elantra	16,164	20	0.55
Berlin	VW Golf Comfort	25,154	136	1.61
Bogotá	Renault Megane	20,484	241	1.13
Bratislava	Skoda Oktavia	21,634	97	1.26
Brussels	Renault Megane Sedan 2.0	24,611	406	1.61
Bucharest	Skoda Octavia Classic 1.9 TDI	19,114	20	1.24
Budapest	Opel Astra 1.8 Ecotec	18,098	92	1.26
Buenos Aires	Peugeot 206	13,925	n.a.	0.64
Caracas	Chevrolet Aveo 1.6	15,614	31	0.50
Chicago	2005 Honda Accord	23,300	78	0.77
Copenhagen	Toyota Corolla 1.6	40,098	404	1.66
Delhi	Mitsubishi Lancer 2.0	17,918	n.a.	1.12
Dubai	Mitsubishi Lancer 2006, 1.3GL	10,491	127	0.41
Dublin	Peugeot 307 1.6 HDi	30,432	499	1.38
Frankfurt	Golf Sportline	30,818	163	1.53
Geneva	VW Golf 2.3l V5	28,341	193	1.31
Helsinki	Toyota Corolla 1.6VVT	26,565	154	1.59
Hong Kong	Honda Civic	20,621	747	1.90
Istanbul	Peugeot 307	21,348	365	1.97
Jakarta	Toyota Altis G 1.8 2006	30,596	209	0.53
Johannesburg	VW Golf	21,210	20	0.89
Kiev	Skoda Fabia	18,190	10	0.83
Kuala Lumpur	Proton	15,083	32	0.46
Lima	Toyota Corolla	14,276	201	1.12
Lisbon	VW Golf 1.9TDI	36,663	150	1.51
Ljubljana	Skoda Octavia	19,513	126	1.18
London	Ford Focus 1.8 Zetec	19,609	307	1.61
Los Angeles	Honda Civic Sedan	16,000	98	0.82
Luxembourg	VW Golf GT 2000 TDI	29,768	25	1.31
Lyon	Renault Megane 2l	25,395	162	1.54
Madrid	Renault Megane	20,992	n.a.	1.31
Manama	Toyota Corolla	15,822	53	0.27
Manila	Nissan Sentra GX 1.3	11,983	34	0.75
Mexico City	Sentra Nissan	12,697	299	0.68
Miami	Honda Civic	23,000	n.a.	n.a.
Milan	Grande Punto Sedan 1.4	18,820	212	1.57
Montreal	Toyota Corrola LE 1.8l	14,470	221	0.94
Moscow	Toyota Avensis 2.0	29,888	11	0.64
Mumbai	Maruti Suzuki Esteem	11,241	n.a.	1.09
Munich	VW Golf 5 1.9 TDI	26,059	113	1.56
Nairobi	Peugot 406 2l	n.a.	n.a.	1.03
New York	Ford Focus ZX4-S	13,745	85	0.83
Nicosia	Opel Vectra 1800cc	33,584	94	1.13
Oslo	Volvo V50 2006	39,148	433	1.73
Paris	Peugeot 307 1.4	21,535	290	1.60
Prague	Skoda Octavia 1.8	21,107	378	1.26
Riga	Toyota Avensis 1.8	26,249	42	1.03
Rio de Janeiro	VW Golf 1.8	22,785	548	1.24
Rome	Fiat Punto 1.9 MJT	22,439	325	1.60
Santiago de Chile	Peugeot 206	11,416	210	1.06
Sao Paulo	Ford Fiesta Sedan 1.6	14,566	549	1.32
Seoul	Samsung AM5	23,034	124	0.89
Shanghai	Fiat Siena	9,947	249	0.57
Singapore	Toyota Camry 2000cc	49,318	1233	1.12
Sofia	Opel Astra Classic	15,481	36	1.09
Stockholm	Volvo S 40	26,576	211	1.46
Sydney	Toyota Corolla Ascent Sedan	14,754	187	0.89
Taipei	Toyota Altis 1.8E 2006	25,064	348	0.81
Tallinn	Toyota Corolla 1.6l	20,050	n.a.	1.10
Tel Aviv	n.a.	n.a.	n.a.	n.a.
Tokyo	Honda Accord 20A	19,819	338	1.23
Toronto	Ford Focus ZX3 SE	19,993	64	0.89
Vienna	VW Golf 1.9 TDI	25,449	526	1.30
Vilnius	VW Passat Comforline	27,501	24	1.12
Warsaw	Ford Focus II 1,6	17,241	408	1.22
Zurich	VW Golf 1.6 L	22,240	255	1.22

[1] Purchase price (including sales taxes) of a popular mid-range car (5-door, standard equipment).

[2] Annual vehicle tax and/or annual registration fee.

[3] Gas price per liter at the time of the survey (February to the end of April 2006).

n.a. = not available.

Restaurant and hotel prices

City	Restaurant[1] USD	Hotel***** [2] USD	Hotel*** [2] USD
Amsterdam	26	410	130
Athens	31	240	100
Auckland	35	230	90
Bangkok	27	240	130
Barcelona	35	390	160
Beijing	25	240	80
Berlin	31	260	130
Bogotá	22	150	80
Bratislava	29	270	110
Brussels	37	280	130
Bucharest	19	300	240
Budapest	25	270	120
Buenos Aires	22	130	70
Caracas	31	230	50
Chicago	36	440	220
Copenhagen	51	280	150
Delhi	19	330	110
Dubai	39	340	120
Dublin	53	350	170
Frankfurt	37	330	130
Geneva	42	430	170
Helsinki	51	320	150
Hong Kong	26	340	190
Istanbul	45	290	80
Jakarta	12	270	60
Johannesburg	17	280	110
Kiev	27	360	140
Kuala Lumpur	12	150	40
Lima	28	180	110
Lisbon	36	420	120
Ljubljana	22	260	130
London	64	500	190
Los Angeles	44	360	200
Luxembourg	36	310	150
Lyon	32	200	130
Madrid	37	370	140
Manama	40	250	130
Manila	18	190	120
Mexico City	32	240	50
Miami	38	400	180
Milan	50	450	190
Montreal	27	220	140
Moscow	26	290	120
Mumbai	20	290	110
Munich	40	310	100
Nairobi	21	160	100
New York	50	450	250
Nicosia	42	310	200
Oslo	54	340	200
Paris	39	380	200
Prague	12	220	100
Riga	24	270	100
Rio de Janeiro	32	240	120
Rome	35	430	220
Santiago de Chile	33	230	80
Sao Paulo	30	270	90
Seoul	35	250	100
Shanghai	31	260	70
Singapore	29	300	90
Sofia	14	210	90
Stockholm	40	380	180
Sydney	48	310	110
Taipei	36	290	120
Tallinn	36	410	170
Tel Aviv	32	260	170
Tokyo	77	510	270
Toronto	37	210	110
Vienna	35	300	140
Vilnius	28	230	90
Warsaw	32	220	100
Zurich	47	390	170

[1] Price of an evening meal (three-course menu with starter, main course and dessert, without drinks) including service, in a good restaurant.

[2] Price for a double room en-suite, including breakfast for two and service in a first-class hotel in the international category or in a good mid-range hotel.

Expensive hotel stays in London and Tokyo

Most people visiting a foreign city spend the night in a hotel. The average of all cities in our survey came out to USD 298 a night for a double room with bathroom in a first-class hotel of the international category, including breakfast and service charges. Even at the top end of the market, there still are considerable price differences. The same stay will cost guests USD 510 in Tokyo, USD 500 in London, USD 450 in Milan and USD 450 in New York. In Buenos Aires, Bogotá, Kuala Lumpur and Nairobi, on the other hand, hotel rooms of similar quality can be had for as little as USD 160 a night. Many characteristics of the specific locality are reflected in these clear price differences in the luxury city hotel segment. These include local wage levels, infrastructure standards, location, room size, the hotel's relative prestige and the city's image. Seasonal and political factors also can affect the cost of a visit. Regionally, Africa and South America are roughly 30% below the average global price level, while visitors to Western Europe (USD 350) and North America (USD 347) pay the most on the average for an exclusive hotel stay for two.

If you can do without luxury, overnight stays in Mexico City, Kuala Lumpur and Caracas are the cheapest. An overnight for two in a three-star hotel in these cities costs just USD 50. Tokyo (USD 270) again emerges as the priciest location of all.

The average bill for a three-course restaurant meal – consisting of starter, main course and dessert, with service included but without drinks – is USD 33 in the 71 cities surveyed. The cheapest places to dine out are Kuala Lumpur, Prague and Jakarta; while our meal will also cost you less than USD 17 in Sofia and Johannesburg. The most expensive place to eat? Yet again, Tokyo (USD 77). Diners in London, Oslo and Dublin can also expect a relatively steep bill for our sample meal. ■

Kuala Lumpur and Manila favorable for a short stay

Besides expenses for accommodation and food, a stroll around town also has its price. To get a picture of price differences for a short stay in a large city, we put together a basket of ten goods and services comprising an overnight stay for two in a first-class hotel, two dinners with a bottle of the house red wine, one taxi ride, a 100 kilometers in a rental car, two outings to the theatre by public transport, and various small expenditures such as a paperback novel or a phone call. This package is most expensive in London, where visitors will cough up USD 1180, and Tokyo, where the basket costs USD 1090, excluding the money needed to get there and back. Our short stay doesn't come much cheaper in cities like Geneva, New York, Oslo or Zurich, either. The global average price for our quick trip is USD 640. The cheapest places are Kuala Lumpur, Manila, Buenos Aires and Nairobi. For people with a budget of less than USD 450, Sofia, Bogotá and Lima are appealing choices. Regionally, the price difference is the most extreme between Africa (USD 425) and Western Europe (USD 800), Africa on the average costing over than 40% less for a short trip. But costs differ widely within Western Europe, too: a short stay in London is more than three times as expensive as one in Sofia (USD 380). At USD 723, a short stay in North America is also disproportionately high. ■

Price of a city break

City	Total USD	Index New York = 100
Amsterdam	770	83.7
Athens	580	63.0
Auckland	590	64.1
Bangkok	490	53.3
Barcelona	730	79.3
Beijing	510	55.4
Berlin	680	73.9
Bogotá	400	43.5
Bratislava	540	58.7
Brussels	710	77.2
Bucharest	530	57.6
Budapest	590	64.1
Buenos Aires	340	37.0
Caracas	610	66.3
Chicago	800	87.0
Copenhagen	850	92.4
Delhi	550	59.8
Dubai	640	69.6
Dublin	820	89.1
Frankfurt	760	82.6
Geneva	940	102.2
Helsinki	870	94.6
Hong Kong	830	90.2
Istanbul	700	76.1
Jakarta	480	52.2
Johannesburg	500	54.3
Kiev	610	66.3
Kuala Lumpur	260	28.3
Lima	410	44.6
Lisbon	760	82.6
Ljubljana	540	58.7
London	1180	128.3
Los Angeles	720	78.3
Luxembourg	720	78.3
Lyon	630	68.5
Madrid	770	83.7
Manama	560	60.9
Manila	330	35.9
Mexico City	560	60.9
Miami	740	80.4
Milan	860	93.5
Montreal	580	63.0
Moscow	580	63.0
Mumbai	470	51.1
Munich	770	83.7
Nairobi	350	38.0
New York	920	100.0
Nicosia	610	66.3
Oslo	920	100.0
Paris	870	94.6
Prague	460	50.0
Riga	530	57.6
Rio de Janeiro	580	63.0
Rome	770	83.7
Santiago de Chile	500	54.3
Sao Paulo	650	70.7
Seoul	530	57.6
Shanghai	550	59.8
Singapore	630	68.5
Sofia	380	41.3
Stockholm	820	89.1
Sydney	660	71.7
Taipei	610	66.3
Tallinn	750	81.5
Tel Aviv	540	58.7
Tokyo	1090	118.5
Toronto	580	63.0
Vienna	750	81.5
Vilnius	470	51.1
Warsaw	650	70.7
Zurich	900	97.8

Methodology

Expenditure includes two evening meals with wine, an overnight hotel stay for two, car rental costs (100 km), public transport and taxifare and various minor expenses (phone call, paperback, etc.).

Prices of services

City	USD	Index New York = 100
Amsterdam	500	83.3
Athens	420	70.0
Auckland	420	70.0
Bangkok	270	45.0
Barcelona	500	83.3
Beijing	230	38.3
Berlin	440	73.3
Bogotá	310	51.7
Bratislava	230	38.3
Brussels	500	83.3
Bucharest	230	38.3
Budapest	300	50.0
Buenos Aires	220	36.7
Caracas	290	48.3
Chicago	520	86.7
Copenhagen	640	106.7
Delhi	200	33.3
Dubai	470	78.3
Dublin	550	91.7
Frankfurt	500	83.3
Geneva	570	95.0
Helsinki	600	100.0
Hong Kong	420	70.0
Istanbul	440	73.3
Jakarta	210	35.0
Johannesburg	350	58.3
Kiev	290	48.3
Kuala Lumpur	140	23.3
Lima	300	50.0
Lisbon	400	66.7
Ljubljana	350	58.3
London	640	106.7
Los Angeles	510	85.0
Luxembourg	500	83.3
Lyon	540	90.0
Madrid	490	81.7
Manama	430	71.7
Manila	250	41.7
Mexico City	390	65.0
Miami	480	80.0
Milan	500	83.3
Montreal	500	83.3
Moscow	420	70.0
Mumbai	170	28.3
Munich	520	86.7
Nairobi	210	35.0
New York	600	100.0
Nicosia	400	66.7
Oslo	740	123.3
Paris	590	98.3
Prague	240	40.0
Riga	260	43.3
Rio de Janeiro	370	61.7
Rome	460	76.7
Santiago de Chile	360	60.0
Sao Paulo	380	63.3
Seoul	440	73.3
Shanghai	240	40.0
Singapore	420	70.0
Sofia	200	33.3
Stockholm	600	100.0
Sydney	450	75.0
Taipei	340	56.7
Tallinn	310	51.7
Tel Aviv	330	55.0
Tokyo	690	115.0
Toronto	530	88.3
Vienna	530	88.3
Vilnius	280	46.7
Warsaw	360	60.0
Zurich	620	103.3

Methodology
Weighted basket of 27 services.

Wage costs make up an important share of service prices
We have put together a basket of 27 so-called non-transferable goods and services. In addition to the products that made up the basket in our 2003 edition (haircut, dry cleaning, telephone bill, cinema ticket, restaurant, and others), we have added a new set of items to better reflect current consumer patterns, including a DSL Internet connection, tuition fees for different training courses and tickets for leisure activities. Also in keeping with observable preferences, we have raised the weighting of services to the whole basket from 17% in 2003 to 20% for this survey.

Overall, the global average price of the basket is USD 400. The large price gaps in services prices reflect significant differences in wage costs as well as the fact that many services are not subject to international trade. Services cost most in Western Europe and North America, where its overall price tag is well above USD 500. The cheapest regions in this respect are Africa and Eastern Europe, where prices on average do not exceed the USD 280 mark. At city level, services are relatively expensive in Oslo (USD 740).

An issue that attracted our attention in previous years was the relatively high price of an overnight stay (for two persons) in a double room suite of a first-class hotel of international standards in cities with a generally low overall price level. We decided to add an enquiry about an equivalent service at a 3 stars local hotel to find out weather there was a relative price difference between international and local service standards. Indeed, whereas top-class hotel prices deviate only 28.5% from the global average, prices of medium-level hotels diverge almost 40% from the worldwide mean. An additional subject that stands-out in 2006 vis-à-vis 2003 is the lower prices for telecommunication services. This decline may reflect the impact of more competition in the sector due to liberalization measures undertaken in several countries. ■

International wage comparison

Dorothea Fröhlich, Oliver Futterknecht, Karin Schefer

International wage comparison

Gross earnings are highest in Scandinavia and Switzerland: Copenhagen, Oslo, Zurich and Geneva top the rankings in our international comparison of wages. Gross wages in Mumbai, Delhi, Jakarta and Manila amount to less than 10 percent of the wages in the top-ranked cities. By region, the highest gross hourly wages, an average USD 16–17, are paid in Europe and North America. In Asia, a worker receives an average USD 5 per hour before taxes and social security contributions; in Eastern Europe and South America that average is just USD 4.

There are often substantial wage differences within individual cities for various job profiles. These differences are often based on the type of employer. Especially in emerging and developing countries, wages are markedly lower in the public sector than they are in the private sector. And within the private sector, a further distinction can be made between local companies and international corporations.

Sofia, Bulgaria, is typical of many cities in our survey. An elementary school teacher there earns just under USD 2100 per month, while a secretary in the private sector takes home almost double that amount. At just under USD 7700 a product manager in the Bulgarian capital earns substantially more – due mainly to the fact that this job profile is in demand, particularly among international or large domestic companies. In addition, state workers benefit the least from increases in productivity, which are at least partially passed on to workers in the private sector in the form of higher wages.

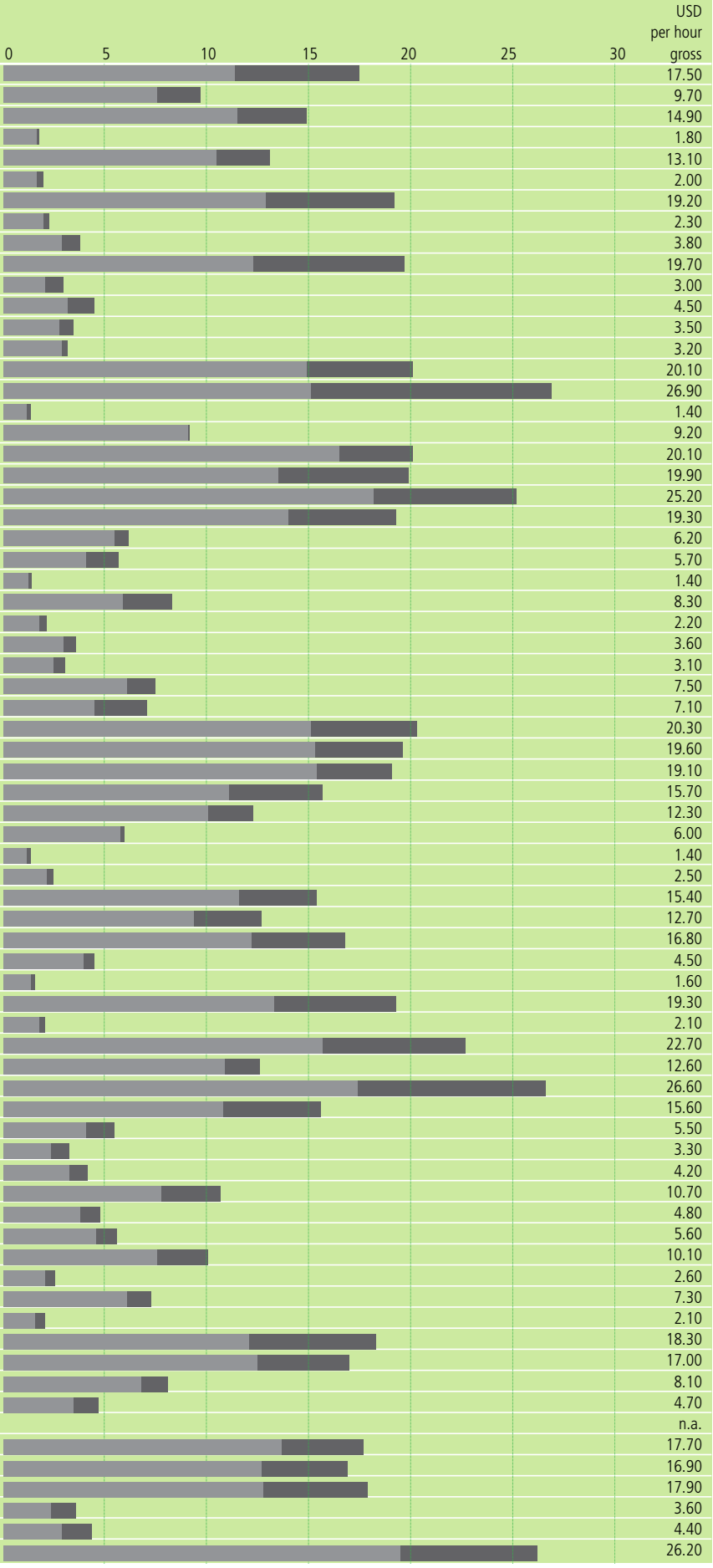
The primary reason for wage differences, however, lies in the level of education or work experience. The category of highly qualifed jobs includes heads of department, engineers and product managers, who, thanks to a higher level of education (university or technical college qualification), can perform demanding tasks. For the sake of consistency, we set a minimum of five years' professional experience in our questionnaire. Based on this qualification, product managers earn a global average of USD 43500; and engineers just under USD 36700. Lacking a formal professional education, construction workers have to get by on an average USD 15800 and factory workers on USD 13700.

Notably, according to our survey, global discrepancies in wages are larger than those of prices. This is at least partly explained by the composition of the basket of commodities, which is based on Western consumer habits: local preferences often result in a far lower cost of living in many cities. In Asia, for example, less bread is consumed, while heating oil costs in Peru and Kenya are virtually nonexistent.

In contrast to price levels, wages in many countries have barely increased since our last survey, in 2003. The outsourcing of jobs to low-wage countries, a practice which has continued to grow over the years, has led to a drop in industrial employment in Western Europe and North America. Outsourcing mainly affects professions with a low level of qualification, shrinking job opportunities available to affected workers. And in the countries benefiting from the outsourcing trend, there may be more employment opportunities, but little evidence of rising wages. A constant influx of job-seekers into the big cities, coupled with often rudimentary labor laws in emerging countries keep wage growth low for the time being. ■

Methodology
Wage comparisons always involve a certain degree of estimation and extrapolation. In some cities, it proved exceptionally difficult to collect concrete information on wages and social security deductions. Our table of wages and salaries covers 14 occupations; one new profession of a call center agent has been added to the comparison since the last issue of "Prices and Earnings". On the one hand, these professions were selected to represent a cross-section of the workforce in the industrial and service sectors. On the other hand, the professions were selected with an eye to being able to collect and delimit comparable data the world over. For this reason, we came up with detailed questionnaires on age, personal status, education and length of employment and used these as the basis for inquiries at representative companies in each city. Because our figures do not represent statistical averages, and their collection was limited to just a few companies for each profession, a choice of different firms might produce different results. The complete tables are in the appendix on pages 40–47.
Gross income: Annual gross income including fringe benefits such as profit sharing, bonuses, holiday pay, additional months' salary payments, family allowances).
Taxes and social security contributions: Income tax, taking into account marital status and standard allowances; social security payments: mandatory contributions by employees to statutory pension, disability and unemployment insurance as well as to state medical insurance. Social security contributions also include employee contributions to occupational health and pension insurance, if they are customary in the city or country concerned.
Net income: Gross income after taxes and social security contributions.

Gross and net hourly pay in US



City	USD per hour net	USD per hour gross
Amsterdam	11.40	17.50
Athens	7.60	9.70
Auckland	11.50	14.90
Bangkok	1.70	1.80
Barcelona	10.50	13.10
Beijing	1.70	2.00
Berlin	12.90	19.20
Bogotá	2.00	2.30
Bratislava	2.90	3.80
Brussels	12.30	19.70
Bucharest	2.10	3.00
Budapest	3.20	4.50
Buenos Aires	2.80	3.50
Caracas	2.90	3.20
Chicago	14.90	20.10
Copenhagen	15.10	26.90
Delhi	1.20	1.40
Dubai	9.10	9.20
Dublin	16.50	20.10
Frankfurt	13.50	19.90
Geneva	18.20	25.20
Helsinki	14.00	19.30
Hong Kong	5.50	6.20
Istanbul	4.10	5.70
Jakarta	1.30	1.40
Johannesburg	5.90	8.30
Kiev	1.80	2.20
Kuala Lumpur	3.00	3.60
Lima	2.50	3.10
Lisbon	6.10	7.50
Ljubljana	4.50	7.10
London	15.10	20.30
Los Angeles	15.30	19.60
Luxembourg	15.40	19.10
Lyon	11.10	15.70
Madrid	10.10	12.30
Manama	5.80	6.00
Manila	1.20	1.40
Mexico City	2.20	2.50
Miami	11.60	15.40
Milan	9.40	12.70
Montreal	12.20	16.80
Moscow	4.00	4.50
Mumbai	1.40	1.60
Munich	13.30	19.30
Nairobi	1.80	2.10
New York	15.70	22.70
Nicosia	10.90	12.60
Oslo	17.40	26.60
Paris	10.80	15.60
Prague	4.10	5.50
Riga	2.40	3.30
Rio de Janeiro	3.30	4.20
Rome	7.80	10.70
Santiago de Chile	3.80	4.80
Sao Paulo	4.60	5.60
Seoul	7.60	10.10
Shanghai	2.10	2.60
Singapore	6.10	7.30
Sofia	1.60	2.10
Stockholm	12.10	18.30
Sydney	12.50	17.00
Taipei	6.80	8.10
Tallinn	3.50	4.70
Tel Aviv	n.a.	n.a.
Tokyo	13.70	17.70
Toronto	12.70	16.90
Vienna	12.80	17.90
Vilnius	2.40	3.60
Warsaw	2.90	4.40
Zurich	19.50	26.20

Gross income in USD per hour

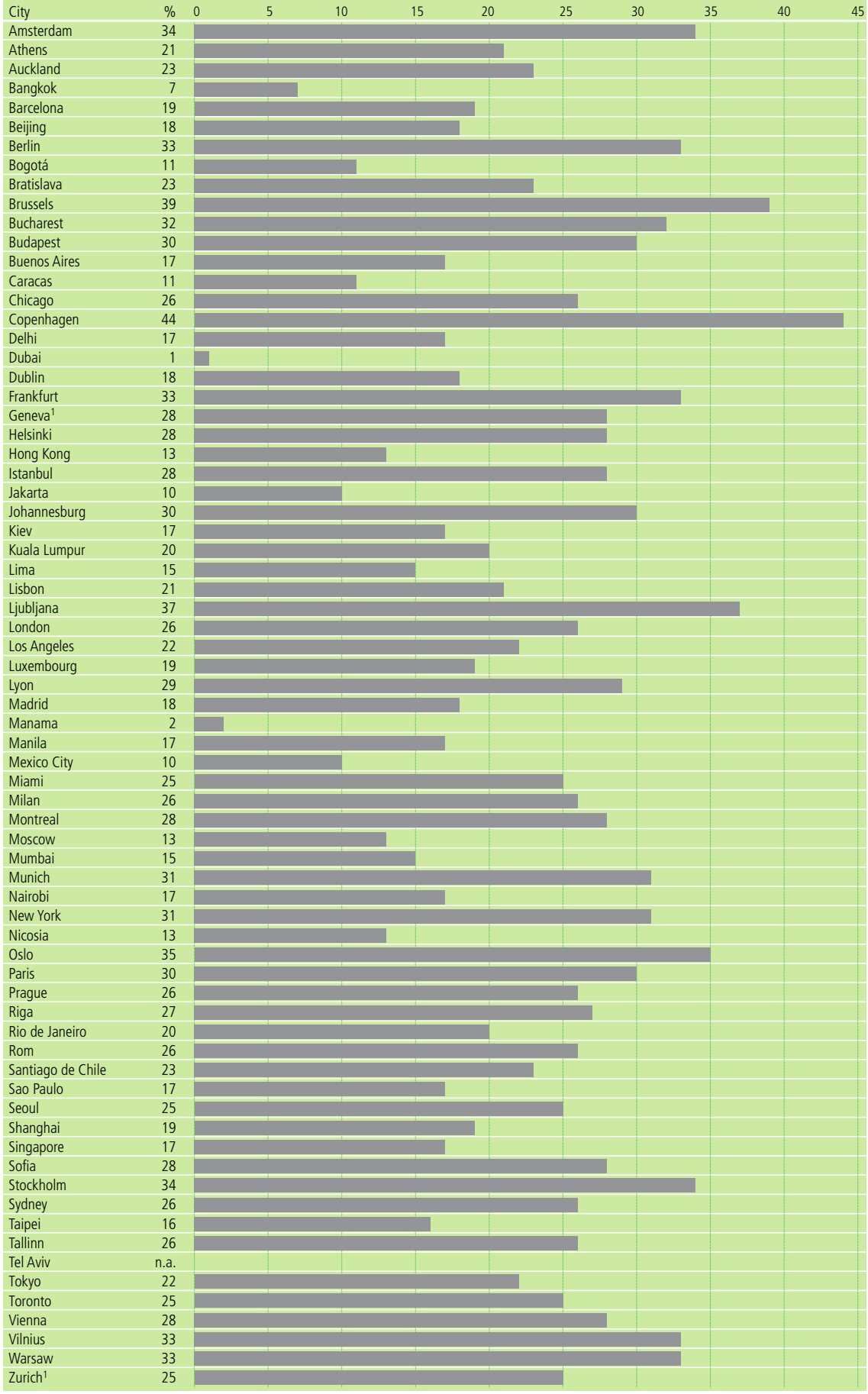
Net income in USD per hour

Methodology

Effective hourly wage in 14 professions, taking into account working hours, paid vacation and legal holidays. Weighting according to distribution of professions.

n.a. = not available

Taxes and social security contributions



City	%
Amsterdam	34
Athens	21
Auckland	23
Bangkok	7
Barcelona	19
Beijing	18
Berlin	33
Bogotá	11
Bratislava	23
Brussels	39
Bucharest	32
Budapest	30
Buenos Aires	17
Caracas	11
Chicago	26
Copenhagen	44
Delhi	17
Dubai	1
Dublin	18
Frankfurt	33
Geneva[1]	28
Helsinki	28
Hong Kong	13
Istanbul	28
Jakarta	10
Johannesburg	30
Kiev	17
Kuala Lumpur	20
Lima	15
Lisbon	21
Ljubljana	37
London	26
Los Angeles	22
Luxembourg	19
Lyon	29
Madrid	18
Manama	2
Manila	17
Mexico City	10
Miami	25
Milan	26
Montreal	28
Moscow	13
Mumbai	15
Munich	31
Nairobi	17
New York	31
Nicosia	13
Oslo	35
Paris	30
Prague	26
Riga	27
Rio de Janeiro	20
Rom	26
Santiago de Chile	23
Sao Paulo	17
Seoul	25
Shanghai	19
Singapore	17
Sofia	28
Stockholm	34
Sydney	26
Taipei	16
Tallinn	26
Tel Aviv	n.a.
Tokyo	22
Toronto	25
Vienna	28
Vilnius	33
Warsaw	33
Zurich[1]	25

■ Total taxes and social security contributions in % of gross wages.

Methodology
Income tax and mandatory or customary social security contributions (see p. 26).

[1] Including basic health care insurance

n.a. = not available.

Deductions equal almost a quarter of gross salary

The country in which a company or employee is located profoundly affects the burden of taxes and social security contributions on gross income. The global average of tax and social security deductions in the 71 cities surveyed amounted to around 23%, with the 14 selected occupations weighted in terms of their share of overall employment and income and their gender breakdown. In Europe, the impact of deductions on net income is much greater than our average, particularly in cities in the northern and eastern cities of the region. The tax leaders are Copenhagen (44%) and Brussels (39%), followed by Ljubljana, Oslo, Amsterdam, Stockholm, Warsaw, Vilnius, Frankfurt and Berlin, where at least a third of gross wages is deducted. In contrast, Madrid, Dublin (both 18%), and Luxemburg and Barcelona (both 19%) are relative tax havens in Europe. Payroll deductions are lowest worldwide in Bangkok, Jakarta, Mexico City, Bogotá and Caracas, where less than 12% of gross income – which itself is generally modest – goes to taxes and social security contributions. In Dubai (1%) and Manama (2%), state deductions are practically nil. From a regional perspective, North America (26%) also carries a relatively heavy deduction burden, right behind Europe (28%), as compared to only around 9% of gross income in the Middle East, 16% in South America and 17% in Asia.

Compared with our survey conducted three years ago, the average deductions for tax and social security contributions have remained fairly constant. However, these burdens increased by four percent or more in Johannesburg, Santiago de Chile, Sofia, Prague, Oslo, Paris, Kuala Lumpur, Rio de Janeiro and Nairobi since our last look. Cities with an improved position in the listing include Dublin, Milan, Rome, Toronto and, in particular, Singapore.

High net incomes in Switzerland and the U.S.

After deducting taxes and social security contributions, employees in Swiss, American and some Northern European cities earned the most. The weighted average net hourly wage for our selected 14 occupations amounted to USD 19.50 in Zurich, around USD 18.20 for Geneva, approximately USD 17.40 for Oslo and Dublin and just under USD 16 in New York. Despite the declining US dollar, New York and Los Angeles held steady with their fifth and eighth place rankings respectively. Chicago, however, fell back six slots, and Miami eleven. Exchange rate movements had a quite favorable influence on rankings for Rio de Janeiro, Saõ Paulo, Sydney, Auckland and Bratislava, which together with Buenos Aires and Dublin moved up six slots or more compared with our survey three years ago.

The average net hourly wage for all cities surveyed was USD 7.85. Considered regionally, workers in North America and Western Europe received the highest net wages at an average USD 13–14 per hour, followed by Oceania with a solid USD 12; while employees in Eastern Europe (USD 3) and South America (USD 3) earned the least. Workers in Delhi, Manila, Jakarta, Mumbai, Sofia, Bangkok and Beijing earn less than USD 1.80 per hour net. In Kiev, Nairobi, Bogotá, Shanghai, Bucharest, Mexico City, Riga and Vilnius, net hourly wages range between USD 1.80 and USD 2.40. ■

Welfare and tax systems

Public services, healthcare and welfare systems are not equally well-developed in every country. The percentage of gross wages deducted for taxes and social security contributions therefore varies from city to city. Although comparing taxes and social security contributions as a percentage of gross wages is a good indicator of income actually available for private consumption, it should not be forgotten that social security contributions may also make up a portion of personal expenditure, for example, in case of illness or for personal pension schemes. In a global comparison, deductions are highest in Scandinavia, yet many services such as childcare are available to all at no extra cost, employment is supported and a minimum wage is assured. Another example of how local conditions impact disposable income is health insurance. In Switzerland, for example, although basic insurance is obligatory, contributions are unrelated to income (subsidized for very low income residents). Conversely, the data on contribution rates gives an incomplete picture of the tax burden, as only direct income taxes have been recorded. In addition, reforms resulting in lower tax rates are often offset by increasing the sales tax. The resultant reorganization of national tax regimes in turn produces distortions in the data compared here. Singapore is a good example, where the trend toward a lower income tax burden has been balanced by a corresponding rise in indirect taxation.

Tax systems also affect wage disparities within a city. While the progressive tax systems prevalent in western countries actively reduce any disparity in wages, particularly in respect to mid-range incomes, many emerging and developing countries fail to reduce differences through proportional tax systems, leaving the wage-gap wide open, even when comparing net wages. For example, direct income tax is 13% in Moscow, regardless of the income level. In Germany, tax rates rise progressively to a maximum of 42%.

Working hours and vacation days

City	Working hours per year	Vacation days[1] per year
Amsterdam	1687	25
Athens	1714	24
Auckland	1686	20
Bangkok	2023	10
Barcelona	1758	21
Beijing	2064	9
Berlin	1611	29
Bogotá	2065	15
Bratislava	1760	20
Brussels	1672	21
Bucharest	1771	21
Budapest	1834	26
Buenos Aires	2053	18
Caracas	1918	16
Chicago	1971	17
Copenhagen	1644	22
Delhi	2121	15
Dubai	2050	29
Dublin	1727	21
Frankfurt	1650	29
Geneva	1795	23
Helsinki	1603	29
Hong Kong	2231	9
Istanbul	2023	15
Jakarta	2013	12
Johannesburg	1902	21
Kiev	1712	23
Kuala Lumpur	2024	16
Lima	2052	25
Lisbon	1708	22
Ljubljana	1756	21
London	1782	20
Los Angeles	1957	11
Luxembourg	1725	25
Lyon	1572	25
Madrid	1724	22
Manama (Bahrain)	1965	21
Manila	2042	13
Mexico City	2266	14
Miami	1809	14
Milan	1744	25
Montreal	1795	12
Moscow	1643	22
Mumbai (Bombay)	2205	17
Munich	1649	27
Nairobi	1984	21
New York	1869	13
Nicosia	1753	22
Oslo	1627	24
Paris	1481	27
Prague	1771	20
Riga	1737	20
Rio de Janeiro	1709	30
Rome	1747	21
Santiago de Chile	2077	17
Sao Paulo	1736	30
Seoul	2317	10
Shanghai	1969	9
Singapore	2041	12
Sofia	1871	20
Stockholm	1726	25
Sydney	1682	23
Taipei	2143	12
Tallinn	1746	20
Tel Aviv	n.a.	n.a.
Tokyo	1954	18
Toronto	1731	15
Vienna	1649	25
Vilnius	1744	21
Warsaw	1772	24
Zurich	1808	23

Method
Annual working hours including vacation (paid) and legal holidays; weighted average of 13 professions (excluding elementary school teachers).

[1] Paid working days (excluding legal holidays).

n.a. = not available.

Working hours and vacation days

The global average number of vacation days and hours worked per year is 20 and 1,844, respectively. Our 2006 survey shows once more that working hours are the longest in Asian cities (regional mean of 2,088 hours per year). Seoul, with 2,317 hours per year or 50.2 hours per week, is at the top of the international ranking. In Hong Kong (2,231), Mumbai (2,205), Taipei (2,143) and Delhi (2,121), workers are also subjected to long working hours. One reason why yearly working hours in Asia are considerably longer is the fact that working weeks for some of the professions in our survey amount to six days, compared to a five-day working week in Europe. Asia also stands out in terms of paid vacation days, once again on the negative side. It is the region where employees are entitled with fewest days per year, namely 12, considerably less than the global average of 20, let alone the standard 30 days in the top ranked Brazilian cities.

Western Europe, by contrast, is very attractive for employees who value their leisure time. On average, the region is relatively generous when it comes to vacation days, although these can vary to a large extent among cities. In Berlin, for example, workers have a total 29 paid vacation days per year – eight days or one-and-a-half working weeks more than in London, Dublin or Rome. Regarding working hours, Western Europe also excels with an average of 1,687 working hours per year, or 39 hours on a weekly basis. Here again, the differences within the region are important. The regional average is only exceeded by the Middle East (1,558 and 35, respectively) and matched by Oceania (1,684 and 39). The French capital Paris is the absolute top city of our survey when it comes to leisure time, with only 1,481 hours per year, or 35 per week, dedicated to work. Another seven Western European cities belong to the top ten in this regard. ■

Analysis

Dirk Faltin, Dorothea Fröhlich, Daniel Kalt

The internal market and euro drive price convergence in Europe

Price convergence is regarded as a key indicator of market integration and efficiency. Our study confirms a reduction in price differences within the EU and the Eurozone since the early 1990s. European price convergence seems to have been driven mainly by two integration efforts: the internal market program and the introduction of the common currency.

One of the main aims of the European integration process is to raise the living standards in member states. The creation of a unified internal market, with free movement of people, goods, services and capital, is the centerpiece of the EU's ambitions. The project for a single domestic market was begun in 1985 by the former president of the European Commission, Jacques Delors, and came into force on January 1, 1993. Starting in 1985, EU institutions and member states have drawn up and enacted a great many directives aimed at removing technical, regulatory, legal, bureaucratic and cultural barriers to free the movement of goods and people within the Union.

Common internal market and currency union as catalysts

Another important milestone on the road to integrating the economies of member states was the introduction of the euro in 2002. At present, twelve states use the common currency. Lowering trade barriers and standardizing competitive conditions were intended to increase competitiveness and lead to an expansion of trade among member states. Under the plan, companies in the member states are allowed unrestricted access to the more than 460 million consumers in the Union. The goal of this plan is to garner size and efficiency benefits, which tend to lead to lower production costs and, in turn, to higher profits and lower consumer prices.

The lower transaction costs and the greater market transparency brought by the common internal market would necessarily result in reduced price differences between countries. This order of convergence in the level of prices should first become apparent in internationally tradable goods and services. Given the convergence of national incomes between richer and poorer countries, a degree of price harmonization in the area of non-tradable goods largely excluded from international competition should also result. This reduction in price differences for comparable goods and services is an important indicator of market integration and thus for the success of the common internal market.

Price convergence is not a linear process

To measure price convergence on the basis of UBS's city data for 2006, we calculated so-called "variation coefficients" (average deviations from the mean value). Fig. 1 shows that the average price spread for all classes of goods increased from 1985 until the start of the common internal market at the beginning of the 1990s among then-member states. From about 1991, a phase began in which price differences in the EU countries decreased significantly. In our data, this phase of price convergence is evident between 1991 and 1997, and can be considered the result of efforts since 1985 to create a common internal market. By the end of the 1990s, however, the trend appeared to have run out of steam.

In the 12 countries of the Eurozone, the price spread remained virtually unchanged between 1997 and 2000. Indeed, there was even a renewed divergence in prices among all 15 EU member states at the time. In the subsequent period, from 2000 to 2003, there was a considerable decrease in price differences in both the Eurozone and within the 15 EU member states. In all probability, this can be traced to the second push toward convergence due to the launch of the euro. The data collected in the latest UBS price survey in 2006 show that this trend has petered out, with the price spread remaining practically unchanged for the last three years. This would suggest that price convergence is not a linear trend: Following every previous drive toward integration, a phase of strengthened price convergence has ensued, only to fizzle out after a few years.

Price level indices for selected product groups

(EU-12 = 100)

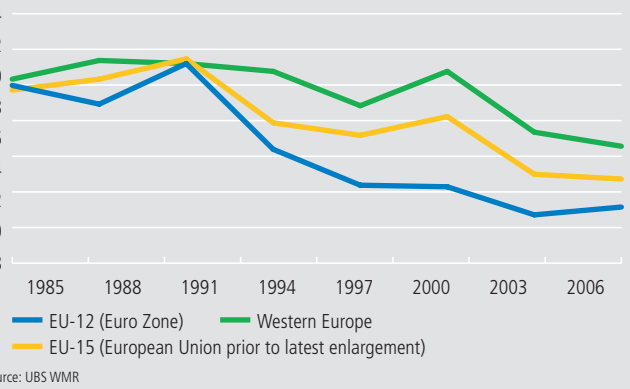
Product category	Highest price	Country	Lowest price	Country	Coefficient of variance*
Durable household appliances	114.7	Austria	87.4	Portugal	7.7
Clothing	118.0	France	87.3	Portugal	11.6
Foods	123.1	Finland	84.2	Greece	11.6
Services	131.7	Finland	75.0	Greece	16.4
Rent	146.4	Irland	67.5	Irland	24.3
Pulic transportation	172.8	Germany	40.9	Greece	38.4
Total outlays	115.3	Finland	81.5	Portugal	11.6

*The coefficient of variance shows the relative price spread around the average. The coefficient of variance is defined as quotient of the standard deviation and the average. The higher the coefficient of variance, the greater the price spread.

Source: UBS WMR

Figure 1: Price convergence in the European Union

Price spreads measured as coefficient of variance in % (standard deviation/average)



Source: UBS WMR

Not all prices can converge

Note, however, that a number of factors are at play in determining price convergence, and these factors can certainly lead to a temporary break in a long-term trend as well. For example, currency exchange fluctuations can have a considerable effect on the price differential between countries. Also, when interpreting the data, it is important to bear in mind that price convergence in each group of goods can develop in completely different ways. It has already been mentioned that goods marketed internationally normally exhibit a narrower price spread than goods and services that are not. Fig. 2 shows the price spread measured by the coefficient of variance for durable household appliances – in other words, internationally marketable goods – and for public transport prices, which do not have substitutes across national borders.

It becomes clear that price convergence is far more advanced for household appliances than for local transport. Following a phase of convergence in the 1970s and '80s, the spread for travel costs has remained practically unchanged since the beginning of the '90s. By the same token, price differences in household appliances have diminished consistently in the same period. That said, the UBS city data show that price convergence has not continued during the last three years. The differences between the price spreads of various goods classes are illustrated by the variation coefficients (Table). They show that goods generally have a lower price spread than services, since goods are not as well suited to international trade.

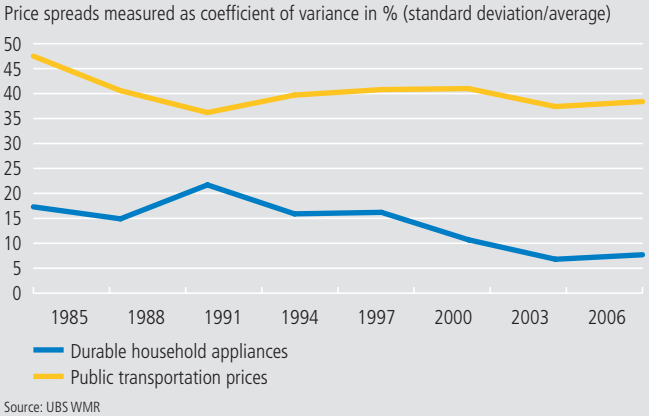
The Eurozone is the most integrated area

Similarly, clear trends can also be seen in the geographical distribution of price convergence. Here, the UBS city data suggests that convergence is greater where economic integration is most advanced. Fig. 3 shows that the price spread in the Eurozone (EU-12) is the lowest, followed by the EU-15 (i.e., the European Union prior to its recent eastward expansion). Western Europe follows, which, despite the inclusion of expensive (and non-EU members) Switzerland and Norway, has a narrower price convergence than the EU-25. The addition of the new members, above all the Eastern European states, has widened the price spread. When interpreting these facts, it should be remembered that geographical proximity automatically produces closer price convergence owing to the lower transport costs. Fig. 1 thus not only shows a realignment brought about by institutional changes, but also reflects the physical proximity of the member states.

Could opening the services market give a new boost to convergence?

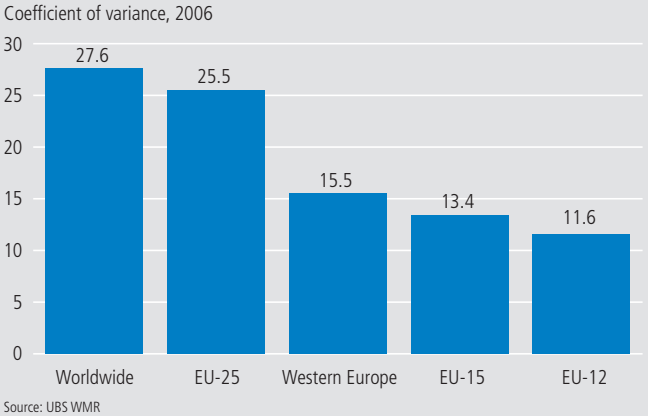
In summary, the UBS city data confirms a reduction in price differences within the EU and the Eurozone since the beginning of the 1990s. They show that prices tend to harmonize at a lower level, indicating increasing market efficiency. As expected, prices of internationally tradable goods and services tend to harmonize more quickly than their non-tradable counterparts. This is noticeable above all in the larger price spread for services, which are generally less tradable across borders than are goods. Price convergence in the EU and the Eurozone appears to have been driven mainly by two integration measures – the common internal market program at the beginning of the 1990s and the launch of the euro in 2002, with the effects then petering out again after a few years. A services directive recently passed by the European Parliament, which envisages opening the services market across national borders, could give a boost to greater convergence in the EU. Once the directive comes into force – likely to be in January 2007 – its various directives will have to be written into national laws by the end of 2009. Whether or not this gives a jolt to greater convergence, particularly in the services sector, may well feature in the UBS price comparison for 2009. ■

Figure 2: Price convergence for different product groups



Source: UBS WMR

Figure 3: Price convergence in terms of economic areas



Source: UBS WMR

Highly differentiated housing prices

Expatriate managers, local elites and average wage earners all need somewhere to live; property developers attempt to serve, and profit from, these market players and governments also influence the interaction between the parties. The following analysis examines several aspects of the housing dynamic.

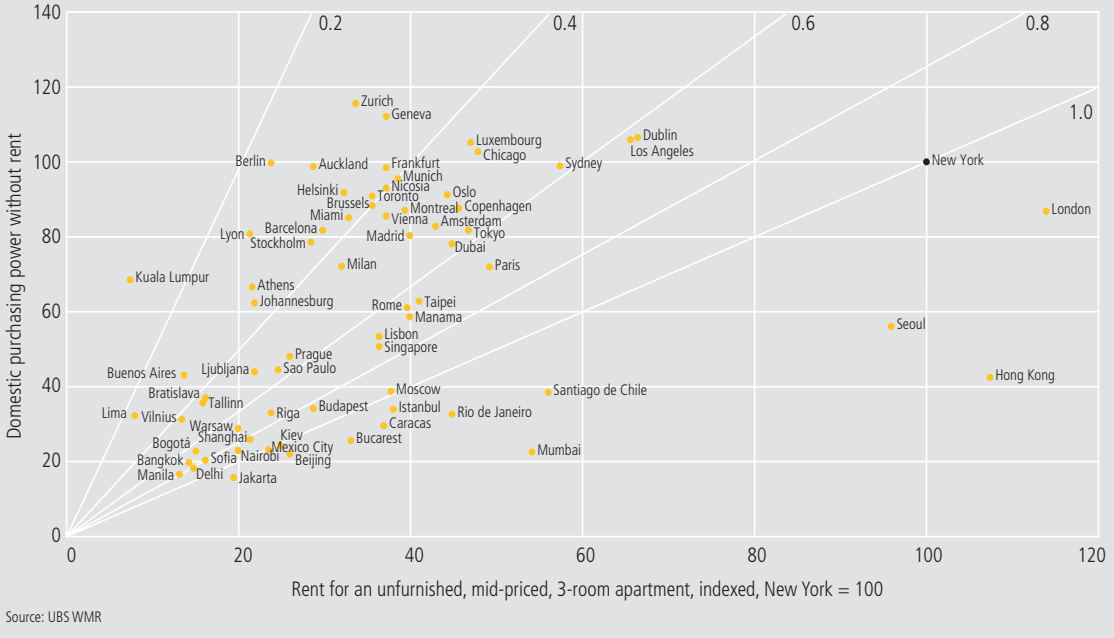
Expensive luxury apartments are easy to find in almost all cities. More time may be required to locate an "average" apartment according to local standards, however, and special wishes regarding the location and quality of the dwelling may also severely limit choices and raise prices. Highly differentiated housing markets in our survey cities result in large local price gaps for a host of factors. Besides location factors – centrality, hours of sunlight, view, noise and available infrastructure in the district – other criteria for housing choices include quality features such as size, floor plan and the standard of the fittings, etc. Housing prices are also influenced by specific local demographics.

High rents at the top despite low domestic purchasing power

Local residents rarely rent luxurious furnished apartments. These residences are usually reserved for foreign executives, who are often confronted with rents in this category of more than EUR 9,000 per month. Locals who can afford expensive housing without the support of a company prefer to buy their properties, since this is more cost-efficient in the long term. In many countries, but particularly in Eastern Europe, costly foreign managers are increasingly being replaced by local employees who do not yet have the purchasing power to demand top standards. As a result, Prague and Bangkok, among others, now have a demand vacuum in the luxury apartment segment. The demand from foreign, company-financed apartment-seekers declined in these cities faster than domestic purchasing power increased. In Beijing and Shanghai as well, demand in this segment has abruptly fallen off. However, this is largely a result of easing highly restrictive rules on where and how foreigners could live. State intervention had led to a concentration of demand that could not be sustained in a free market.

Most real estate developers regard the high-end market segment as very attractive and concentrate their efforts there, regardless of whether the final customer wants to rent or buy. For one thing, construction costs for this segment – excluding interior design – are only fractionally higher than for lower-priced segments; hence profits can be disproportionately high. Construction sites in good locations are expensive, but the costs are frequently passed on to the buyer in the form of a location premium, which might amount to a multiple of the actual cost to the developer. Finally, suppliers in this segment are often able to market their name and image. The developers of the Ice Tower in Panama City, for example, years before its construction, rely on its reputation as Latin America's tallest skyscraper as a sales point. This can lead to speculative and excessive "mega projects" in many cities. And many South American property developers bank on retiring baby-boomers from the north to benefit from the lower prices in the region, and its warmer weather. In Asia, on the other hand, many players assume that the current rate of economic growth will continue unabated, and are busy creating stocks of luxury accommodations. As a result, the luxury sector in many cities had high vacancy rates at the time of our survey. In Shanghai the figure was 18.5%, in Beijing 29.0% and in Jakarta

Rent relative to local purchasing power, (index, New York = 100)



Source: UBS WMR

Relative to the local purchasing power (excluding rents), rents are more expensive in some cities than in New York (New York serves as the reference city with an index value of 100) and much less expensive in others: apartements in Prague and Amsterdam cost half as much to rent as in New York relative to local purchasing power.

as much as 34%. Kuala Lumpur (< 1%) is an exception: virtually no new building projects have begun there in the last three years. The picture is slightly more uniform in Europe and North America, where over-expansion of supply is often limited by more restrictive financing policies and city planning requirements. In the long term, the increasing number of locals in the high-income bracket, as well as the influx of foreigners, will support the demand for expensive dwellings. But in the short-term view, local purchasing power will be unable to absorb the fast-growing supply. Thus, large variations in the number of foreign buyers and renters make prices in this segment particularly volatile.

Scanty supply of affordable rentals

Around the world, most people live in accommodations that reflect domestic purchasing power and each family's income. In contrast to the top segment, this type of dwelling may vary enormously in character from city to city. Residences in cities with high rents relative to purchasing power are on average smaller, with a higher density of persons per household. Residential conditions also differ from region to region. While it is quite normal in Western Europe to rent a three-room apartment, more and more Eastern Europeans own their properties. Older Eastern Europeans often acquired their apartments from the former government, which they were then able to buy at below-market prices during the transition to the market economy. The rental apartment segment in these cities is thus only now developing with new arrivals and a young, independent generation emerging as a middle class. Among the younger locals, the motivation to leave the parental home and live independently is high, creating strong demand for modern, good quality but affordable one- and two-room apartments. In European and North American cities, on the other hand, rented apartments have a long tradition. Many cities in these regions enjoy strong domestic purchasing power and, above all, a more balanced distribution of income than seen in newly industrialized and developing countries. There is thus high demand in almost all sectors, not only for cheap rental apartments, but also for properties in the middle- and high-end segments. Out of yield considerations, this has also led large construction projects concentrating on rental accommodations for this segment, rather than on the lower end of this market. The privately owned supply of affordable accommodation is correspondingly small, which is why the public sector and/or housing associations step into the breach in many cities to supply cheaper places to live.

The high demand for affordable apartments coupled with their deferred construction has created shortages in this segment in many cities. As a result, rents in this segment have increased faster than in other segments in many cities. For example, after allowing for inflation, rents in Rio de Janeiro and São Paolo have more than doubled since our last survey. Contributing to this increase is the fact that the mortgage markets in a great many newly industrialized countries are inefficient, or simply do not exist in any practical sense. The owner-occupier market has not yet been able to develop in these countries to ease the strain on the market for rental properties, as it has in western countries. In some cities, however, a different trend in rents could be observed: Rents in the low-end of the market have risen more moderately than, say, prices for owner-occupied apartments and houses. This is not only due to strict rules on rental accommodation, limiting the extent of rent increases. An environment of low interest rates since our last survey has also favored this trend. In countries with attractive mortgage markets, the low interest rates have shifted a considerable portion of housing demand to the home-owner market and pushed up prices there. In the long term, arbitrage mechanisms anticipate a similar development of prices in the owner-occupier and rented accommodation markets. ■

Income and leisure: Two differently valued elements of prosperity

Hard-working Americans, idle Europeans? A study of historic data from "Prices and Earnings" indicates that Europeans have reduced work hours in favor of more leisure time. In contrast, Americans and Asians are apparently more interested in the extra income. Income and leisure determine prosperity, but more time off only translates into better quality of life once income hits a sufficient level.

Over the last several years, the substantial discrepancy between the performance of the European and US economies has been the subject of repeated discussion, with a wide range of explanations being offered. Our *Research Focus* on the economic impact of aging[1] has suggested that the change in number of hours worked in different countries is the main explanation for the divergent economic growth rates. Figure 1 shows the range of growth factors for individual national economies. Europeans have clearly opted to reduce their working hours over the last 20 years in order to enjoy more leisure time. This has led to a slowing of economic growth in Switzerland, Germany and France by 0.3% to 0.5% annually. In contrast, American workers maintained their high number of working hours throughout the period between 1980 and 2004 at practically unchanged levels. At the very least, the development of working hours there had no significant negative effects on economic growth. The US thus has taken less time off than Europe, and in contrast has experienced a greater increase in income.

These facts support the widely held stereotype of "lazy" Europeans and hardworking Americans, though they tell us nothing about quality of life. Comparing hours worked ignores the fact that free time also generates utility, thus warranting inclusion in any analysis of economic prosperity as a second key component, next to income levels. Below, we will take a closer look at this problem, using historical data from "Prices and Earnings" reports.

[1] UBS WMR 2006 "The coming of age"

Historical data confirms divergent preferences theory

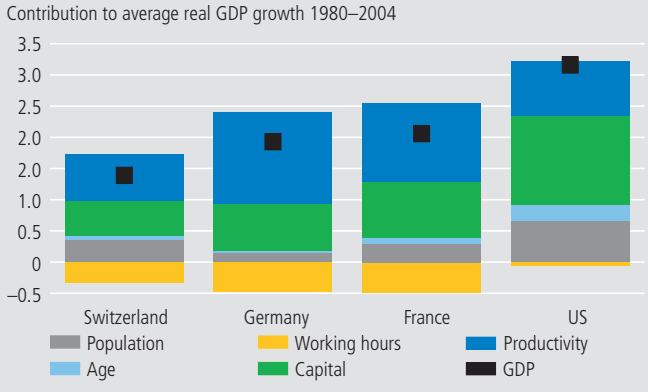
As the "Prices and Earnings" report has been produced since the early 1970' s in practically unaltered form, it provides a unique database for this subject (see box for further details on data and methodology). The available data on the cost of living, net salary/wage levels and annual hours worked permit the calculation of a time off/income ratio for a range of European cities and the three US cities included in the study. We have proceeded by dividing Europe into these three groups:

- "Old Europe" (average for Luxemburg, Helsinki, Oslo, Paris, Stockholm, Vienna, Zurich, Milan, Amsterdam, Brussels, Copenhagen, Düsseldorf, Frankfurt, Geneva)
- "Up-and-coming Southern Europe" (Athens, Lisbon, Madrid)
- "English-speaking Europe" (London, Dublin)

The city groups "Old Europe" and "Up-and-coming Southern Europe" have both seen an increasing time off/earned income ratio since 1976, from around 1.9 up to nearly 2.3. US workers in the three cities surveyed (New York, Los Angeles, Chicago) have in contrast sacrificed time off in the interest of greater income, the applicable ratio falling from 2.2 to about 1.9. Thus data from previous "Prices and Earnings" confirms our original thesis that more robust economic growth in the US is in part attributable to a greater number of hours worked.

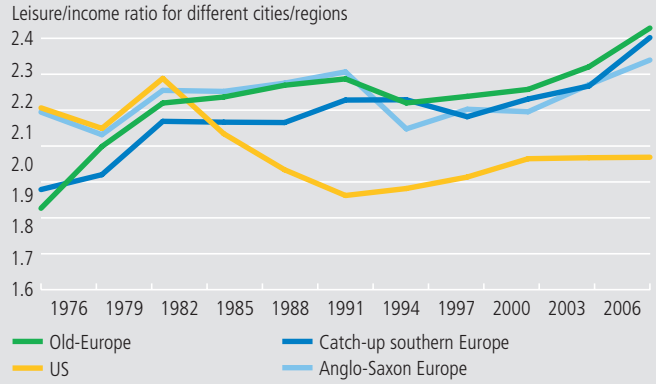
Including Asian cities within the scope of our analysis reveals that workers from this economic area have equally reduced their time off/income ratio over the last 30 years, and that these levels were substantially lower than in American cities to begin with. This supports the stereotype of "industrious" Asians, and is scarcely a surprise, as income levels in Asian cities during the period in question were far below the European and American averages. Starting from low initial levels, work hours can be expected to rise along with rising incomes until a certain point is reached. The opportunity costs of longer work hours only start to

Figure 1: Comparison of GDP growth contributions



Sources: UN, Penn World Table 6.1, Universität Groningen, UBS WMR

Figure 2: Europeans have reduced work hours in favor of more leisure time



Source: UBS WMR

Data and methodology

Earned income and leisure time off weightings

The publication "Prices and Earnings around the Globe" provides consistent sets of data on 36 major international cities going back to 1976, updated every 3 years, including the following:

1. The cost of an identical basket of goods designed around the preferences of Western consumers in each city
2. The average net hourly wages for 12 different occupations (only 9 occupations 1976 through 1979, in 2003: 13 occupations, in 2005: 14 occupations)
3. The average annual number of hours worked
4. The annual hours worked, multiplied by average net hourly wage, yields average annual income for a particular city
5. Points 1) and 4) allow computing an effective purchasing power index for city-specific wage levels; i.e., the number of baskets of goods purchasable during a particular year on an average annual income.
6. Assuming eight hours a day are required for sleep and commuting allows computing annual time off on the basis of annual hours worked. Because individuals theoretically act to maximize utility, every additional hour worked may consequently be assumed to generate the same amount of utility as the hour off work that would have to be sacrificed to perform that additional extra hour of work. The marginal utility of an extra hour of time off is the same as that of an additional hour of work. Hours of time off can therefore be equated in value to an hour worked, i.e., the number of baskets of goods that could be purchased for each hour worked.

Point 5 yields the effective working time (number of baskets of goods purchasable per average annual income); point 6 yields the effective time off implied per "baskets of goods" unit.

Utility: combining income and leisure time off within a single calculation of prosperity

We are assuming that economic prosperity is a function of net earned income and the number of hours of time off enjoyed. A city where it is possible to work less, i.e., enjoy more time off, will afford comparatively greater prosperity, given equal income levels. A measure for economic prosperity should thus be applied combining the two elements income and time off. To arrive at this, we employ the concept of utility, factoring in the two inputs of income and free time as outlined under points 5 and 6, in what is known as the "Cobb-Douglas utility function":

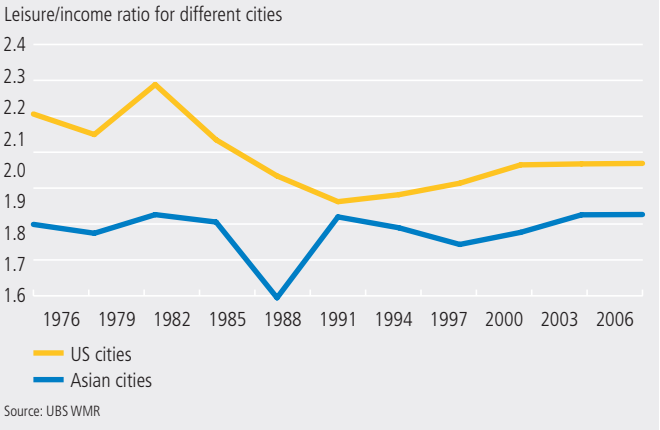
$$U = (Y)^{\alpha} \times (L)^{(1-\alpha)}$$

In the above function, U represents utility, Y represents income and L represents time off for a given city. α indicates the weighting of income/time off within the utility function. For simplicity's sake we have assumed that $\alpha = 0.5$, meaning an equal weighting of the baskets of goods obtainable through earned income and time off. Entering income and time off values into the utility formula above yields the economic utility, a prosperity unit applicable for all cities over the entire period for which data is available.

rise once a particular income level is attained, when people can "afford" to take more time off.

But is it really possible to accurately measure and compare differing income levels and amounts of leisure time for different cities by the same yardstick? How, for example, can an annual income of USD 33,100 and 3,900 hours of time off in Chicago be compared with an annual income of USD 22,200 and 4,200 hours of time off in Paris? The most popular economic measure applied for these purposes is the concept of utility, i.e., the usefulness afforded by goods of different types.

Figure 3: Asian and US workers kept working hours high



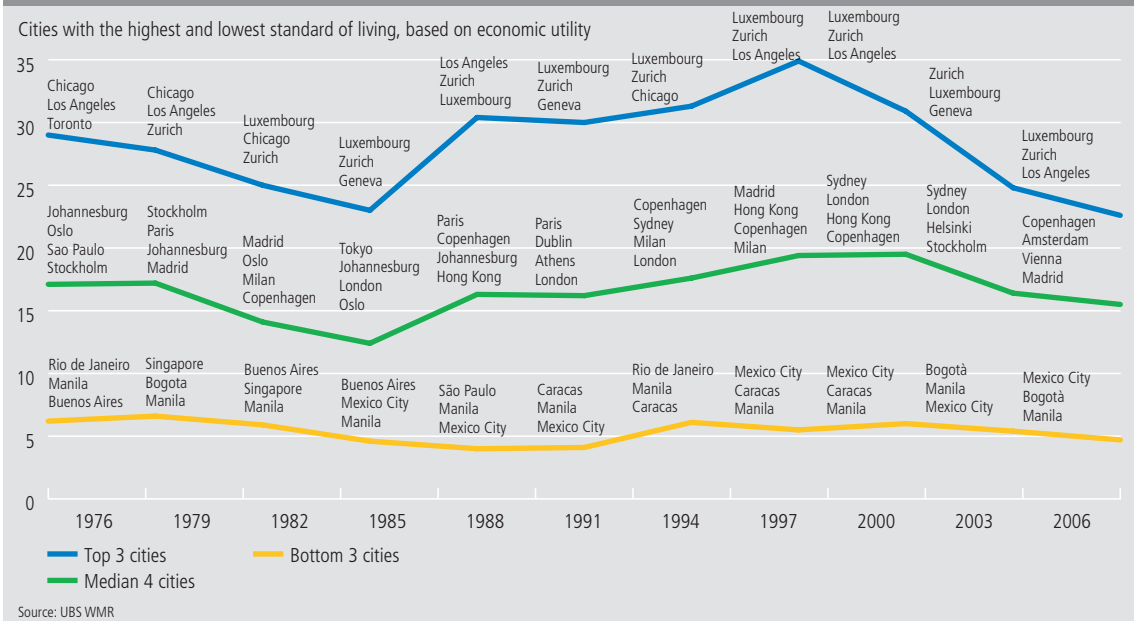
Utility analysis: Income and time off determine prosperity

In this last section we attempt to come up with a unified measure of economic prosperity applicable across different cities and incorporating the two factors income and time off. This indicator is based on the concept of economic utility (see box for details). We proceeded by computing averages for the three highest scoring cities, the three lowest scoring cities in terms of utility and the four cities occupying the middle range (median) of the representative group of 36 cities. Figure 4 presents the results of this utility analysis.

Unsurprisingly, the cities with the highest net income came out ahead in this analysis, while cities from developing or emerging market countries with relatively low-income levels landed at the bottom of the utility scale. One noteworthy point is that the three North American cities Chicago, Los Angeles and Toronto, which were top-ranked at the start of the period of observation, gradually fell behind a number of European cities in utility. It thus appears that the Europeans' tactic of steadily reducing work hours in favor of more free time was in fact the "right decision," applying the definition of economic prosperity/utility employed here. This presumes, however, that European and American

workers derive the same utility, i.e., that they value employment income and free time identically, thus weighting the constituent elements of utility the same way. This presumption is not strictly correct, as it is entirely possible that Europeans have a stronger preference for leisure time than Americans. While this does bear consideration, the utility analysis provided here offers a number of interesting insights into the quality of life enjoyed in different cities. First and foremost of these is the conclusion that income is the primary driver of economic prosperity. Once income reaches a certain level, people are then in a position to think about the potential of deriving greater marginal utility from additional time off, taking into account slightly lower earned income. Europe and the US have taken divergent paths in this regard, as our survey data re-veals. ■

Figure 4: Income and leisure time determine economic prosperity



Source: UBS WMR

Income is the primary driver of economic prosperity: cities with the highest net income also have the highest standard of living, based on economic utility. However, once income reaches a certain level, the utility derived from more leisure time increases.

Appendix

Earnings and working hours of professions from the

Industrial sector

Car mechanic
Building labourer
Skilled industrial worker
Factory worker
Engineer
Department head

Incomes and working hours of car mechanics[1]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	30,700	20,700	39
Athens	15,700	12,600	40
Auckland	28,400	22,100	40
Bangkok	3,200	3,000	45
Barcelona	24,600	19,700	40
Beijing	4,500	3,900	44
Berlin	32,700	21,200	37
Bogotá	3,300	2,900	47
Bratislava	8,400	6,500	42
Brussels	38,100	22,800	38
Bucharest	4,600	3,200	40
Budapest	8,900	6,100	42
Buenos Aires	6,200	5,200	42
Caracas	5,200	4,600	40
Chicago	43,800	32,800	43
Copenhagen	49,800	28,800	37
Delhi	1,900	1,900	48
Dubai	12,300	12,300	46
Dublin	34,400	27,700	39
Frankfurt	33,200	22,000	39
Geneva	42,600	30,300	42
Helsinki	30,900	22,400	38
Hong Kong	13,200	12,500	40
Istanbul	8,700	6,200	44
Jakarta	2,500	2,400	48
Johannesburg	15,700	11,000	45
Kiev	3,600	3,000	38
Kuala Lumpur	8,800	7,400	40
Lima	6,800	5,500	48
Lisbon	12,000	10,000	40
Ljubljana	10,800	7,000	40
London	32,800	24,400	43
Los Angeles	39,500	31,200	45
Luxembourg	26,100	21,900	40
Lyon	30,200	21,100	41
Madrid	18,700	15,500	38
Manama	6,400	6,100	45
Manila	2,000	1,800	44
Mexico City	3,600	3,400	45
Miami	31,300	23,700	40
Milan	20,400	15,300	40
Montreal	33,800	23,600	39
Moscow	13,000	11,400	44
Mumbai	2,200	n.a.	48
Munich	31,300	21,100	39
Nairobi	3,100	2,800	44
New York	42,800	30,300	41
Nicosia	25,200	22,800	40
Oslo	49,900	32,300	37
Paris	20,900	14,700	35
Prague	10,600	7,700	40
Riga	8,100	5,900	38
Rio de Janeiro	4,500	4,500	41
Rome	19,600	14,700	40
Santiago de Chile	9,300	7,400	48
Sao Paulo	9,400	7,600	40
Seoul	9,300	8,000	54
Shanghai	6,100	5,000	40
Singapore	14,800	11,800	44
Sofia	5,700	4,200	43
Stockholm	32,700	21,700	40
Sydney	26,200	20,200	41
Taipei	19,200	16,300	51
Tallinn	10,000	7,400	40
Tokyo	32,400	25,900	47
Toronto	31,200	23,300	38
Vienna	31,100	22,100	39
Vilnius	7,800	5,200	40
Warsaw	7,700	5,200	41
Zurich	44,800	34,000	42

[1] With completed apprenticeship and around 5 years' experience; about 25 years old, single.

n.a. = not available.

Incomes and working hours of building labourers[1]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	25,600	17,700	39
Athens	13,800	11,200	40
Auckland	19,700	15,600	40
Bangkok	1,500	1,400	45
Barcelona	18,200	14,600	40
Beijing	2,000	1,800	52
Berlin	25,600	n.a.	40
Bogotá	2,500	2,300	46
Bratislava	4,800	3,700	40
Brussels	33,000	20,400	39
Bucharest	3,200	2,200	40
Budapest	6,000	4,600	43
Buenos Aires	3,900	3'200	48
Caracas	5,400	5,400	44
Chicago	35,700	27,500	43
Copenhagen	44,200	25,400	36
Delhi	800	800	44
Dubai	3,600	3,600	48
Dublin	31,000	25,500	39
Frankfurt	26,700	18,000	39
Geneva	45,100	31,400	40
Helsinki	28,800	21,600	39
Hong Kong	12,400	11,800	56
Istanbul	8,900	6,800	44
Jakarta	1,900	1,800	48
Johannesburg	4,900	4,700	43
Kiev	3,200	2,600	40
Kuala Lumpur	4,200	3,700	48
Lima	6,500	5,300	44
Lisbon	8,600	7,700	40
Ljubljana	9,800	6,700	40
London	36,800	27,800	40
Los Angeles	30,000	24,800	48
Luxembourg	22,900	19,300	40
Lyon	17,600	14,500	35
Madrid	18,400	15,100	42
Manama	3,200	3,000	60
Manila	2,000	1,800	52
Mexico City	2,400	2,200	45
Miami	23,900	18,000	40
Milan	24,300	18,300	40
Montreal	24,400	18,500	38
Moscow	6,600	5,700	40
Mumbai	1,300	1,200	48
Munich	29,500	21,200	38
Nairobi	2,000	1,900	46
New York	45,300	30,500	41
Nicosia	14,700	12,900	40
Oslo	45,900	29,800	37
Paris	15,300	10,500	35
Prague	9,900	7,400	40
Riga	4,400	3,200	40
Rio de Janeiro	3,500	3,000	40
Rome	19,200	14,700	40
Santiago de Chile	6,900	5,400	48
Sao Paulo	4,000	3,600	42
Seoul	13,400	10,400	54
Shanghai	2,100	1,900	47
Singapore	13,300	13,300	44
Sofia	3,300	2,600	47
Stockholm	33,800	24,700	40
Sydney	29,500	23,500	28
Taipei	16,700	14,900	50
Tallinn	6,400	4,800	40
Tokyo	31,200	24,300	,46
Toronto	23,100	17,300	38
Vienna	22,400	17,000	39
Vilnius	7,000	4,700	40
Warsaw	5,300	3,600	41
Zurich	39,700	28,900	42

Incomes and working hours of skilled industrial workers[2]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	39,500	25,500	37
Athens	21,100	15,700	40
Auckland	34,100	25,800	48
Bangkok	4,700	4,500	48
Barcelona	28,600	22,800	40
Beijing	4,800	4,100	40
Berlin	37,700	27,000	35
Bogotá	4,900	4,300	47
Bratislava	10,100	7,800	41
Brussels	46,400	29,700	38
Bucharest	5,600	4,000	40
Budapest	8,500	5,800	43
Buenos Aires	10,700	8,600	43
Caracas	7,500	6,500	44
Chicago	54,400	37,400	40
Copenhagen	52,600	31,100	39
Delhi	6,300	5,200	48
Dubai	19,200	19,200	48
Dublin	53,000	44,800	39
Frankfurt	38,700	28,400	38
Geneva	52,200	40,300	40
Helsinki	40,900	28,400	39
Hong Kong	12,000	10,700	50
Istanbul	13,400	9,800	44
Jakarta	3,800	3,300	40
Johannesburg	n.a.	n.a.	n.a.
Kiev	6,100	5,100	40
Kuala Lumpur	10,900	9,000	48
Lima	10,300	8,500	52
Lisbon	11,600	9,700	40
Ljubljana	15,700	9,700	40
London	46,500	34,400	38
Los Angeles	44,900	36,800	40
Luxembourg	27,400	21,700	40
Lyon	23,100	14,300	35
Madrid	23,800	20,000	40
Manama	22,600	21,900	40
Manila	2,800	2,500	44
Mexico City	4,700	4,400	45
Miami	42,800	32,300	40
Milan	22,700	16,300	40
Montreal	46,400	31,700	39
Moscow	5,800	5,800	37
Mumbai	6,400	5,200	45
Munich	44,000	27,100	38
Nairobi	6,300	5,000	42
New York	65,400	43,300	41
Nicosia	33,600	28,900	40
Oslo	51,600	32,600	37
Paris	19,700	14,400	35
Prague	12,700	9,100	40
Riga	11,500	8,600	40
Rio de Janeiro	12,400	8,700	40
Rome	21,700	15,700	41
Santiago de Chile	12,200	9,800	43
Sao Paulo	14,600	11,700	44
Seoul	39,100	30,300	48
Shanghai	6,700	5,500	40
Singapore	15,500	12,200	44
Sofia	5,800	4,500	40
Stockholm	36,300	22,500	40
Sydney	39,800	26,900	40
Taipei	19,900	16,900	45
Tallinn	9,800	7,300	40
Tokyo	52,500	41,500	45
Toronto	49,100	35,800	43
Vienna	40,200	27,700	39
Vilnius	6,800	4,600	40
Warsaw	8,600	5,700	41
Zurich	58,400	42,800	40

[1] Unskilled or semi-skilled labourer; about 25 years old, single.

[2] Skilled worker with vocational training and about 10 years' experience with a large company in the metal-working industry; approx. 35 years old, married, two children.

n.a. = not available.

Incomes and working hours of female factory workers[1]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	25,300	16,800	38
Athens	14,400	11,300	40
Auckland	20,300	16,100	35
Bangkok	1,900	1,700	45
Barcelona	15,700	12,700	40
Beijing	1,800	1,600	45
Berlin	23,600	16,200	35
Bogotá	3,800	3,400	47
Bratislava	4,700	3,600	40
Brussels	27,900	18,200	38
Bucharest	3,400	2,400	40
Budapest	6,200	4,800	41
Buenos Aires	3,700	3,100	48
Caracas	10,900	9,800	44
Chicago	24,200	19,100	45
Copenhagen	37,900	22,200	38
Delhi	900	800	44
Dubai	12,300	n.a.	48
Dublin	26,500	22,400	39
Frankfurt	22,200	14,200	39
Geneva	35,100	25,400	40
Helsinki	22,600	17,700	37
Hong Kong	7,000	6,600	50
Istanbul	6,700	4,600	44
Jakarta	1,400	1,300	48
Johannesburg	4,900	4,700	43
Kiev	2,200	1,800	40
Kuala Lumpur	3,900	3,400	44
Lima	3,000	2,500	42
Lisbon	7,400	6,600	40
Ljubljana	8,500	5,700	40
London	28,900	21,900	39
Los Angeles	22,400	18,500	40
Luxembourg	23,600	19,900	40
Lyon	16,800	13,600	36
Madrid	14,500	12,900	40
Manama	5,600	5,400	40
Manila	1,400	1,300	44
Mexico City	3,400	3,200	45
Miami	22,300	17,300	40
Milan	17,200	13,800	40
Montreal	25,100	18,900	39
Moscow	3,700	3,200	33
Mumbai	1,800	1,600	45
Munich	n.a.	n.a.	n.a.
Nairobi	3,400	2,700	42
New York	30,500	22,100	41
Nicosia	14,700	12,900	40
Oslo	35,800	24,900	37
Paris	17,400	13,000	35
Prague	8,100	6,000	40
Riga	4,300	3,100	40
Rio de Janeiro	3,900	3,500	40
Rome	17,900	13,400	40
Santiago de Chile	7,800	6,200	43
Sao Paulo	6,700	5,400	44
Seoul	8,800	7,600	54
Shanghai	2,600	2,100	47
Singapore	8,900	8,900	44
Sofia	2,900	2,300	40
Stockholm	29,800	18,700	40
Sydney	21,400	15,000	40
Taipei	15,500	12,500	44
Tallinn	5,200	3,900	40
Tokyo	26,200	17,400	,45
Toronto	21,300	16,300	40
Vienna	21,800	16,900	39
Vilnius	3,700	2,500	40
Warsaw	5,400	3,600	41
Zurich	38,800	30,000	40

Incomes and working hours of engineers[2]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	54,600	33,100	39
Athens	26,100	19,500	40
Auckland	40,500	29,900	40
Bangkok	12,700	11,300	48
Barcelona	42,800	34,200	40
Beijing	9,000	7,400	40
Berlin	57,500	34,500	38
Bogotá	15,100	11,900	44
Bratislava	12,600	9,800	41
Brussels	43,500	26,200	37
Bucharest	13,500	9,400	40
Budapest	15,900	10,900	40
Buenos Aires	20,400	16,600	43
Caracas	15,600	13,900	48
Chicago	70,300	48,400	40
Copenhagen	72,000	40,300	39
Delhi	6,100	5,100	47
Dubai	53,100	52,300	48
Dublin	56,200	43,800	40
Frankfurt	63,800	38,500	39
Geneva	65,100	48,700	42
Helsinki	55,800	35,300	39
Hong Kong	38,700	36,600	48
Istanbul	16,700	12,800	47
Jakarta	5,600	4,900	44
Johannesburg	51,000	30,900	40
Kiev	5,100	4,300	40
Kuala Lumpur	15,700	12,500	40
Lima	12,600	9,500	44
Lisbon	35,700	24,600	40
Ljubljana	18,200	11,500	40
London	63,100	45,800	40
Los Angeles	76,700	55,100	40
Luxembourg	89,600	62,700	40
Lyon	58,300	39,300	35
Madrid	39,200	32,200	40
Manama	51,100	49,500	40
Manila	5,000	4,100	48
Mexico City	15,200	11,800	48
Miami	56,600	42,100	40
Milan	41,800	28,500	40
Montreal	59,900	38,600	38
Moscow	16,600	14,500	48
Mumbai	7,500	5,800	48
Munich	57,200	37,100	39
Nairobi	16,400	13,600	42
New York	85,200	55,900	41
Nicosia	37,800	31,700	40
Oslo	74,000	44,800	39
Paris	52,500	35,100	35
Prague	14,700	10,700	40
Riga	9,900	7,400	40
Rio de Janeiro	22,700	16,700	40
Rome	31,700	21,600	40
Santiago de Chile	22,900	17,000	47
Sao Paulo	27,700	20,400	42
Seoul	41,200	31,900	54
Shanghai	8,100	6,300	40
Singapore	33,300	25,000	44
Sofia	5,300	3,800	40
Stockholm	48,100	32,100	40
Sydney	47,200	35,100	40
Taipei	32,500	26,600	45
Tallinn	12,000	8,900	40
Tokyo	60,100	46,200	51
Toronto	63,300	46,000	40
Vienna	57,400	36,500	39
Vilnius	9,100	6,100	40
Warsaw	12,200	8,000	40
Zurich	83,000	61,700	42

[1] Unskilled or semi-skilled machine operator in a medium-sized company, mainly in the textile industry; about 25 years old, single.

[2] Employed by an industrial firm in the electrical engineering sector, university or technical college graduate with at least 5 years' work experience; about 35 years old, married, two children.

n.a. = not available.

Incomes and working hours of department heads[1]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	82,600	47,000	39
Athens	49,200	37,500	40
Auckland	45,900	30,700	40
Bangkok	15,300	13,700	44
Barcelona	41,100	32,900	40
Beijing	11,900	9,700	40
Berlin	70,000	41,300	40
Bogotá	19,000	15,100	42
Bratislava	14,700	11,500	41
Brussels	83,800	55,800	38
Bucharest	14,700	10,300	40
Budapest	16,600	10,200	43
Buenos Aires	17,800	14,200	45
Caracas	7,500	6,700	44
Chicago	77,300	50,800	50
Copenhagen	87,000	44,400	41
Delhi	12,800	9,600	48
Dubai	73,600	73,600	42
Dublin	60,300	52,600	39
Frankfurt	83,100	56,200	40
Geneva	101,500	71,700	42
Helsinki	72,600	44,600	41
Hong Kong	27,100	24,300	45
Istanbul	31,300	24,900	44
Jakarta	7,400	5,400	40
Johannesburg	54,800	33,500	40
Kiev	6,000	5,000	40
Kuala Lumpur	27,300	24,100	44
Lima	22,800	19,200	45
Lisbon	20,300	15,800	40
Ljubljana	29,000	16,300	40
London	76,300	55,700	39
Los Angeles	86,500	67,100	40
Luxembourg	83,800	58,900	40
Lyon	n.a.	n.a.	n.a.
Madrid	35,400	29,600	40
Manama	51,100	49,500	40
Manila	10,900	8,400	44
Mexico City	18,000	15,700	45
Miami	49,700	37,000	40
Milan	33,100	24,100	40
Montreal	58,400	38,500	39
Moscow	23,400	20,400	38
Mumbai	22,500	19,300	41
Munich	85,200	49,000	43
Nairobi	8,900	7,400	44
New York	89,200	60,500	41
Nicosia	63,000	48,900	42
Oslo	93,800	44,800	40
Paris	71,400	45,200	38
Prague	16,800	11,900	40
Riga	23,400	17,500	45
Rio de Janeiro	29,700	17,800	40
Rome	31,000	23,400	42
Santiago de Chile	22,100	16,600	43
Sao Paulo	33,500	24,500	44
Seoul	55,600	38,100	45
Shanghai	25,400	18,200	40
Singapore	66,600	51,300	44
Sofia	18,100	13,200	40
Stockholm	75,000	44,600	40
Sydney	66,400	42,000	46
Taipei	62,000	39,700	50
Tallinn	16,700	12,400	40
Tokyo	83,300	62,000	48
Toronto	51,900	37,800	40
Vienna	84,400	51,500	39
Vilnius	16,500	11,000	40
Warsaw	28,500	16,000	41
Zurich	115,200	83,100	41

Incomes and working hours of product managers[2]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	62,700	38,600	40
Athens	28,400	22,100	40
Auckland	59,000	41,000	40
Bangkok	14,300	12,900	40
Barcelona	53,900	42,100	40
Beijing	9,700	7,600	40
Berlin	65,400	37,900	39
Bogotá	26,300	20,500	42
Bratislava	15,500	12,100	41
Brussels	61,900	35,200	39
Bucharest	34,300	23,900	40
Budapest	23,900	14,100	43
Buenos Aires	19,000	15,500	45
Caracas	5,600	5,100	48
Chicago	92,000	68,600	45
Copenhagen	80,200	40,000	41
Delhi	8,600	7,200	48
Dubai	42,500	42,500	42
Dublin	76,900	61,800	40
Frankfurt	67,500	45,400	39
Geneva	107,100	75,000	40
Helsinki	63,500	39,900	39
Hong Kong	31,000	27,300	45
Istanbul	28,200	20,100	47
Jakarta	5,400	4,600	40
Johannesburg	43,000	27,400	40
Kiev	n.a.	n.a.	n.a.
Kuala Lumpur	27,600	20,200	44
Lima	79,600	54,200	45
Lisbon	44,100	29,200	40
Ljubljana	28,800	15,700	40
London	60,500	44,200	39
Los Angeles	97,500	66,100	48
Luxembourg	59,700	46,100	40
Lyon	57,000	43,400	35
Madrid	45,000	35,200	43
Manama	27,900	27,100	40
Manila	11,200	9,000	40
Mexico City	19,100	16,600	45
Miami	60,900	45,400	40
Milan	52,500	39,000	40
Montreal	50,500	33,400	39
Moscow	31,600	27,500	43
Mumbai	9,900	7,300	41
Munich	81,200	47,400	39
Nairobi	16,800	12,200	44
New York	87,100	55,000	41
Nicosia	42,000	34,400	40
Oslo	89,200	58,400	39
Paris	62,100	41,000	37
Prague	14,800	10,500	40
Riga	23,800	17,600	40
Rio de Janeiro	19,600	13,900	40
Rome	n.a.	n.a.	n.a.
Santiago de Chile	33,200	25,000	43
Sao Paulo	24,300	19,500	44
Seoul	42,200	28,900	45
Shanghai	22,400	18,800	40
Singapore	74,000	51,800	44
Sofia	7,700	5,400	40
Stockholm	65,600	46,500	40
Sydney	49,500	34,200	42
Taipei	33,300	26,100	49
Tallinn	17,000	12,600	40
Tokyo	60,100	46,400	,48
Toronto	51,300	36,200	45
Vienna	59,100	36,700	39
Vilnius	12,400	8,300	40
Warsaw	22,000	13,000	42
Zurich	95,200	70,500	42

[1] Operational head of a production department with a staff of over 100 in a sizeable company in the metal-working industry; completed vocational training and many years' experience in the field; about 40 years old, married, two children.

[2] Employed in the pharmaceuticals, chemicals or food industry, middle-management position, university or technical college graduate with at least 5 years' experience in the field; about 35 years old, married, no children.

n.a. = not available.

Earnings and working hours of professions from the

Services sector

Primary school teacher
Bus driver
Cook
Personal assistant
Sales assistant
Call center agent
Bank credit officer

Incomes and working hours of primary school teachers[1]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours[2]
Amsterdam	41,900	27,700	37
Athens	24,800	19,200	34
Auckland	31,600	24,200	35
Bangkok	3,900	3,800	40
Barcelona	33,100	26,700	39
Beijing	6,000	5,200	40
Berlin	48,100	31,300	41
Bogotá	5,200	4,400	40
Bratislava	6,000	4,700	38
Brussels	29,100	19,000	33
Bucarest	4,400	3,000	25
Budapest	9,600	6,200	40
Buenos Aires	7,100	5,900	25
Caracas	7,300	6,600	40
Chicago	50,400	37,200	41
Copenhagen	52,000	31,800	39
Delhi	2'700	2'500	30
Dubai	30,200	29,400	40
Dublin	50,400	41,100	37
Frankfurt	51,400	40,500	37
Geneva	69,700	51,500	40
Helsinki	43,100	28,900	36
Hong Kong	46,400	44,000	49
Istanbul	11,200	7,700	42
Jakarta	2,200	2,100	26
Johannesburg	15,100	n.a.	33
Kiev	1,600	1,400	16
Kuala Lumpur	10,000	8,400	48
Lima	3,700	2,700	39
Lisbon	28,700	21,000	33
Ljubljana	23,100	13,300	31
London	42,400	31,300	40
Los Angeles	52,000	40,200	37
Luxembourg	65,200	51,600	23
Lyon	33,400	23,700	31
Madrid	33,300	26,100	38
Manama	13,300	12,600	45
Manila	2,700	2,500	40
Mexico City	7,900	7,300	38
Miami	38,200	28,800	40
Milan	24,700	18,300	28
Montreal	40,500	29,500	35
Moscow	3,700	3,200	19
Mumbai	3,300	2,900	43
Munich	41,000	25,800	35
Nairobi	3,700	3,000	45
New York	52,000	35,500	33
Nicosia	33,600	28,900	35
Oslo	47,300	31,100	41
Paris	29,800	21,300	31
Prague	11,300	8,600	40
Riga	4,800	3,500	38
Rio de Janeiro	5,900	4,600	36
Rome	19,300	14,200	35
Santiago de Chile	9,100	7,300	43
Sao Paulo	6,400	5,600	28
Seoul	43,300	29,600	40
Shanghai	3,400	2,600	40
Singapore	22,200	17,800	42
Sofia	2,100	1,600	33
Stockholm	37,600	23,400	43
Sydney	38,000	28,000	37
Taipei	22,000	19,300	40
Tallinn	7,900	5,900	35
Tokyo	51,900	42,900	49
Toronto	42,900	31,400	40
Vienna	36,800	25,800	39
Vilnius	5,700	3,800	38
Warsaw	7,000	4,700	29
Zurich	72,100	51,800	41

[1] Teaching in the state school system (not private schools) for around 10 years; about 35 years old, married, two children.

[2] Only comparable to a limited extent; as a rule, number of teaching hours plus average number of hours required for preparation, but in some cases teaching hours only.

n.a. = not available.

Incomes and working hours of bus drivers[1]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	35,400	23,700	37
Athens	21,300	16,800	39
Auckland	26,000	20,500	35
Bangkok	3,700	3,500	45
Barcelona	23,100	18,500	40
Beijing	3,100	2,700	48
Berlin	33,200	21,500	43
Bogotá	4,200	3,700	54
Bratislava	8,700	6,800	41
Brussels	30,900	20,300	38
Bucarest	3,800	2,700	40
Budapest	9,400	6,200	41
Buenos Aires	10,500	8,700	48
Caracas	6,200	5,600	40
Chicago	43,400	29,900	50
Copenhagen	42,200	25,700	37
Delhi	2,400	2,200	44
Dubai	10,200	9,800	48
Dublin	35,200	26,800	40
Frankfurt	31,000	23,600	38
Geneva	61,600	46,500	40
Helsinki	33,600	24,400	39
Hong Kong	20,100	17,500	40
Istanbul	15,800	11,800	44
Jakarta	2,200	2,000	48
Johannesburg	6,400	n.a.	44
Kiev	3,200	2,700	40
Kuala Lumpur	6,300	5,600	48
Lima	4,000	2,800	55
Lisbon	16,500	13,200	40
Ljubljana	14,400	11,400	41
London	31,600	23,100	40
Los Angeles	44,400	36,400	40
Luxembourg	46,700	39,800	40
Lyon	26,600	22,000	42
Madrid	24,100	19,000	39
Manama	8,000	7,600	45
Manila	4,100	3,400	44
Mexico City	3,900	3,700	47
Miami	21,100	16,300	40
Milan	24,200	17,700	40
Montreal	33,600	24,700	39
Moscow	11,900	10,400	36
Mumbai	2,600	2,400	48
Munich	34,500	28,300	39
Nairobi	1,700	1,600	54
New York	47,100	31,500	42
Nicosia	25,200	22,800	40
Oslo	41,800	27,800	37
Paris	27,300	19,600	35
Prague	10,000	7,600	40
Riga	5,700	4,300	38
Rio de Janeiro	6,800	6,500	42
Rome	23,500	17,400	40
Santiago de Chile	8,600	6,800	55
Sao Paulo	5,900	5,200	42
Seoul	25,200	19,600	42
Shanghai	3,100	2,500	47
Singapore	11,800	9,500	44
Sofia	3,900	3,000	40
Stockholm	32,100	21,600	39
Sydney	32,700	24,700	40
Taipei	17,300	15,000	n.a.
Tallinn	7,100	5,300	40
Tokyo	45,100	35,900	46
Toronto	40,500	30,200	40
Vienna	29,200	21,600	39
Vilnius	4,100	2,700	40
Warsaw	8,100	5,400	41
Zurich	69,400	53,500	42

Incomes and working hours of cooks[2]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	31,300	18,300	39
Athens	20,500	15,500	40
Auckland	32,300	23,600	30
Bangkok	6,300	5,900	48
Barcelona	36,500	29,200	42
Beijing	12,400	9,800	48
Berlin	36,000	23,900	40
Bogotá	12,400	10,400	46
Bratislava	8,900	7,000	42
Brussels	39,600	23,100	38
Bucharest	13,100	9,100	40
Budapest	16,900	11,800	43
Buenos Aires	12,300	10,200	45
Caracas	11,200	10,000	48
Chicago	46,900	34,900	40
Copenhagen	57,300	30,600	39
Delhi	4,400	4,000	48
Dubai	39,200	39,200	48
Dublin	44,200	33,900	41
Frankfurt	39,800	26,700	39
Geneva	45,000	30,300	42
Helsinki	36,300	25,800	39
Hong Kong	13,900	12,100	48
Istanbul	30,800	22,200	47
Jakarta	4,400	3,800	44
Johannesburg	20,700	14,600	45
Kiev	7,400	6,200	40
Kuala Lumpur	15,400	12,300	48
Lima	6,800	4,900	48
Lisbon	32,000	23,400	40
Ljubljana	20,400	11,500	41
London	37,100	27,600	41
Los Angeles	60,900	47,500	48
Luxembourg	35,400	27,200	40
Lyon	37,400	28,500	44
Madrid	36,600	27,700	40
Manama	13,400	13,000	48
Manila	13,400	10,700	48
Mexico City	15,200	11,400	48
Miami	29,700	22,500	40
Milan	29,800	20,900	40
Montreal	42,800	29,500	40
Moscow	17,400	15,100	35
Mumbai	9,000	6,800	52
Munich	42,800	26,800	39
Nairobi	10,900	8,100	48
New York	42,200	29,800	41
Nicosia	33,600	28,900	40
Oslo	54,100	36,700	38
Paris	41,300	27,000	36
Prague	9,700	7,100	40
Riga	9,400	6,900	40
Rio de Janeiro	17,400	12,600	42
Rome	24,400	17,800	38
Santiago de Chile	14,900	11,800	47
Sao Paulo	18,900	15,500	40
Seoul	50,100	34,300	45
Shanghai	16,200	12,300	40
Singapore	18,500	14,800	44
Sofia	4,300	3,100	42
Stockholm	34,500	20,600	40
Sydney	27,300	21,600	48
Taipei	26,300	21,300	48
Tallinn	11,600	8,600	40
Tokyo	41,000	31,600	48
Toronto	57,000	41,100	41
Vienna	39,000	26,300	39
Vilnius	11,400	7,600	40
Warsaw	13,400	8,800	41
Zurich	49,300	37,000	42

[1] Employed by municipal transport operator, around 10 year's experience; about 35 years old, married, two children.

[2] Commis chef or chef de partie in a good restaurant, supervising about 2 or 3 people; completed vocational training as cook and around 10 years' experience; about 30 years old, single; salary data include value of free board and lodging where provided.

n.a. = not available.

Incomes and working hours of personal assistants[1]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	31,700	20,900	39
Athens	15,500	12,500	40
Auckland	27,500	21,500	38
Bangkok	6,700	6,300	40
Barcelona	29,800	23,900	40
Beijing	4,000	3,500	40
Berlin	34,700	23,300	38
Bogotá	6,000	5,400	42
Bratislava	6,500	5,100	40
Brussels	36,500	22,000	38
Bucharest	6,100	4,200	40
Budapest	9,900	6,500	41
Buenos Aires	8,000	6,600	45
Caracas	4,400	3,900	40
Chicago	45,200	33,800	43
Copenhagen	46,900	26,500	38
Delhi	4,300	3,900	48
Dubai	27,800	n.a.	42
Dublin	33,200	27,500	39
Frankfurt	39,900	25,100	39
Geneva	48,000	33,600	40
Helsinki	32,400	24,200	37
Hong Kong	13,200	11,700	45
Istanbul	12,200	9,100	44
Jakarta	4,500	4,000	44
Johannesburg	14,700	12,200	40
Kiev	3,400	2,800	40
Kuala Lumpur	8,400	7,100	44
Lima	7,600	5,500	40
Lisbon	10,600	8,900	40
Ljubljana	13,600	8,300	40
London	42,100	31,400	39
Los Angeles	43,300	32,800	40
Luxembourg	31,800	25,900	40
Lyon	29,500	19,800	38
Madrid	25,500	20,200	40
Manama	16,000	15,500	39
Manila	2,300	1,900	40
Mexico City	10,100	9,100	45
Miami	35,100	26,500	40
Milan	24,400	17,400	40
Montreal	28,600	20,700	39
Moscow	6,800	5,900	40
Mumbai	4,000	3,600	48
Munich	36,900	28,300	38
Nairobi	4,600	3,800	42
New York	40,200	29,200	41
Nicosia	21,000	17,600	40
Oslo	44,500	29,300	39
Paris	31,100	20,900	35
Prague	9,300	6,800	40
Riga	n.a.	n.a.	n.a.
Rio de Janeiro	11,000	8,800	40
Rome	18,500	13,600	38
Santiago de Chile	11,700	9,300	43
Sao Paulo	14,600	12,100	42
Seoul	25,800	20,000	45
Shanghai	4,500	3,600	40
Singapore	18,500	14,800	44
Sofia	3,800	3,000	40
Stockholm	29,800	20,000	40
Sydney	29,500	22,400	40
Taipei	11,900	10,100	40
Tallinn	8,800	6,500	40
Tokyo	32,900	25,700	,44
Toronto	28,100	21,100	40
Vienna	32,900	23,000	39
Vilnius	7,700	5,100	40
Warsaw	7,700	5,200	40
Zurich	55,600	40,200	42

Incomes and working hours female sales assistants[2]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	19,500	12,800	40
Athens	13,300	10,800	40
Auckland	22,300	17,700	35
Bangkok	2,700	2,500	45
Barcelona	18,200	14,600	40
Beijing	2,700	2,400	45
Berlin	29,500	20,000	39
Bogotá	3,200	2,900	47
Bratislava	4,800	3,800	41
Brussels	23,500	15,500	37
Bucharest	5,100	3,600	40
Budapest	6,900	5,000	43
Buenos Aires	4,600	3,200	48
Caracas	3,100	2,800	40
Chicago	28,700	22,600	41
Copenhagen	39,000	20,200	37
Delhi	2,100	1,900	50
Dubai	16,800	16,800	48
Dublin	29,300	23,700	39
Frankfurt	28,100	18,900	38
Geneva	34,400	24,400	42
Helsinki	23,600	18,200	35
Hong Kong	10,800	10,300	56
Istanbul	10,400	7,300	44
Jakarta	2,600	2,300	40
Johannesburg	10,400	9,000	43
Kiev	4,100	3,400	40
Kuala Lumpur	5,500	4,900	48
Lima	2,100	n.a.	54
Lisbon	11,500	9,600	40
Ljubljana	9,300	6,200	41
London	34,600	25,800	38
Los Angeles	29,800	22,300	39
Luxembourg	21,900	18,400	40
Lyon	22,200	15,100	37
Madrid	18,700	16,600	40
Manama	8,400	8,100	48
Manila	2,500	2,200	44
Mexico City	4,300	4,000	45
Miami	21,000	15,700	40
Milan	19,300	14,500	40
Montreal	19,800	15,600	39
Moscow	3,700	3,300	38
Mumbai	2,400	2,100	48
Munich	28,300	20,100	39
Nairobi	3,700	3,200	49
New York	29,500	21,300	41
Nicosia	14,700	12,900	42
Oslo	39,000	26,100	37
Paris	22,300	15,800	35
Prague	9,900	7,100	40
Riga	3,600	2,600	40
Rio de Janeiro	4,800	3,900	42
Rome	17,500	13,600	41
Santiago de Chile	10,300	8,200	53
Sao Paulo	8,400	6,500	36
Seoul	14,400	11,200	50
Shanghai	3,200	2,200	43
Singapore	9,600	7,700	44
Sofia	3,200	2,500	43
Stockholm	30,600	20,700	40
Sydney	21,900	15,300	40
Taipei	11,700	10,300	45
Tallinn	9,300	6,900	40
Tokyo	28,600	22,800	,43
Toronto	17,500	13,800	40
Vienna	25,400	18,900	39
Vilnius	5,100	3,400	40
Warsaw	8,500	5,400	41
Zurich	39,300	30,400	42

[1] Personal assistant to a department head in an industrial or service company, around 5 years' experience (PC skills, 1 foreign language); about 25 years old, single.

[2] Employed in the women's clothing section of a large department store; sales training plus some years' sales experience, about 20 to 25 years old, single.

n.a. = not available.

Incomes and working hours of Call center agents[1]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	32,600	21,800	38
Athens	14,400	11,600	40
Auckland	22,300	17,700	35
Bangkok	2,800	2,700	41
Barcelona	16,200	12,900	40
Beijing	2,400	1,600	40
Berlin	19,900	13,800	40
Bogotá	6,500	5,800	47
Bratislava	9,300	7,200	42
Brussels	30,700	19,500	34
Budapest	7,700	5,200	43
Buenos Aires	4,700	4,000	38
Bucharest	4,200	2,900	40
Caracas	3,100	2,800	44
Chicago	44,200	33,100	43
Delhi	3,200	3,000	40
Dubai	22,900	22,900	42
Dublin	26,700	21,700	39
Frankfurt	30,800	22,300	37
Geneva	37,800	25,700	41
Helsinki	27,300	20,700	38
Hong Kong	12,400	11,800	50
Istanbul	17,200	12,100	47
Jakarta	2,500	2,300	40
Johannesburg	17,200	14,000	43
Kiev	2,900	2,400	40
Copenhagen	40,800	22,900	37
Kuala Lumpur	n.a.	n.a.	n.a.
Lima	7,100	6,300	45
Lisbon	9,200	7,900	40
Ljubljana	14,700	9,200	40
London	26,300	20,100	39
Los Angeles	37,700	25,900	40
Luxembourg	43,400	33,500	40
Lyon	26,900	17,300	35
Madrid	17,800	14,700	40
Milan	19,300	14,400	39
Manama	n.a.	n.a.	n.a.
Manila	4,300	3,700	43
Mexico City	15,700	13,800	48
Miami	n.a.	n.a.	n.a.
Montreal	26,200	19,700	39
Moscow	7,200	6,300	34
Mumbai	4,300	3,700	40
Munich	26,700	20,100	36
Nairobi	4,200	3,400	52
New York	49,000	32,600	41
Nicosia	16,800	14,900	40
Oslo	36,000	27,000	39
Paris	24,500	16,700	35
Prague	9,600	7,100	40
Riga	3,800	2,800	40
Rio de Janeiro	3,400	3,400	40
Rome	n.a.	n.a.	n.a.
Santiago de Chile	8,600	6,300	43
Sao Paulo	6,700	5,900	36
Seoul	12,900	10,000	54
Shanghai	2,500	1,800	51
Singapore	13,300	10,700	44
Sofia	2,800	2,100	40
Stockholm	33,000	24,500	40
Sydney	26,800	20,400	35
Taipei	12,400	11,400	40
Tallinn	8,500	6,300	40
Tokyo	31,800	25,700	,40
Toronto	22,300	17,600	38
Vilnius	5,100	3,400	40
Warsaw	6,900	4,600	38
Vienna	31,800	22,400	39
Zurich	44,900	33,700	41

Incomes and working hours of bank credit officers[2]

City	Gross income per year in USD	Net income per year in USD	Weekly working hours
Amsterdam	45,700	23,000	38
Athens	25,600	19,700	39
Auckland	26,200	21,100	40
Bangkok	6,400	5,900	40
Barcelona	38,900	31,100	40
Beijing	22,400	17,200	40
Berlin	51,200	31,700	39
Bogotá	13,800	11,700	44
Bratislava	11,800	9,200	41
Brussels	44,200	27,400	38
Bucharest	10,800	7,500	40
Budapest	17,700	10,600	41
Buenos Aires	11,300	9,400	43
Caracas	4,100	3,500	44
Chicago	n.a.	n.a.	n.a.
Copenhagen	59,500	33,600	38
Delhi	5,400	4,400	44
Dubai	32,700	32,700	42
Dublin	46,400	38,000	39
Frankfurt	59,400	39,100	39
Geneva	89,400	63,500	40
Helsinki	36,300	25,500	38
Hong Kong	14,300	10,900	45
Istanbul	18,000	12,100	44
Jakarta	5,600	4,700	44
Johannesburg	17,900	14,100	40
Kiev	5,800	4,800	40
Kuala Lumpur	7,000	6,200	44
Lima	16,000	n.a.	44
Lisbon	26,800	18,700	35
Ljubljana	15,200	9,400	40
London	52,100	38,200	39
Los Angeles	29,200	24,300	40
Luxembourg	70,500	55,700	40
Lyon	54,900	27,200	38
Madrid	36,300	28,500	40
Manama	16,800	15,900	37
Manila	3,400	2,800	40
Mexico City	10,100	9,100	48
Miami	30,800	23,300	40
Milan	30,300	21,800	39
Montreal	41,700	29,200	39
Moscow	18,400	16,000	38
Mumbai	4,900	4,300	53
Munich	45,000	31,700	39
Nairobi	5,600	4,200	44
New York	38,500	27,000	41
Nicosia	31,500	27,400	38
Oslo	51,800	34,600	39
Paris	66,900	43,000	35
Prague	14,500	10,600	40
Riga	22,300	16,500	40
Rio de Janeiro	12,700	9,600	40
Rome	29,100	22,400	39
Santiago de Chile	25,700	20,500	43
Sao Paulo	11,600	8,900	37
Seoul	40,200	31,100	45
Shanghai	20,100	14,800	40
Singapore	22,200	17,800	44
Sofia	3,700	2,600	40
Stockholm	37,300	24,100	40
Sydney	37,500	29,200	44
Taipei	22,900	20,700	40
Tallinn	14,100	10,500	40
Tokyo	74,900	56,300	53
Toronto	41,100	30,100	40
Vienna	41,300	28,200	39
Vilnius	11,500	7,700	40
Warsaw	10,900	7,200	40
Zurich	84,900	68,500	42

[1] Trained agent at an inbound call/service centre, e.g. in the telecommunications ortechnology sector (age about 25, single)

[2] Completed bank training and around 10 years' experience in a bank; about 35 years old, married, two children.

n.a. = not available.

Exchanges rate changes 2003–2006

City	Local currency (LC)		USD/LC 2006[1]	USD/LC △% Δ2006/2003	EUR/LC 2006[1]	EUR/LC △% Δ2006/2003
Amsterdam	EUR	1	1.21	12.43	1.00	–
Athens	EUR	1	1.21	12.43	1.00	–
Auckland	NZD	1	0.66	19.31	0.54	6.14
Bangkok	THB	1	0.03	9.91	0.02	–2.22
Barcelona	EUR	1	1.21	12.43	1.00	–
Beijing	CNY	1	0.12	2.91	0.10	–8.45
Berlin	EUR	1	1.21	12.43	1.00	0.02
Bogotá	COP	100	0.04	28.96	0.04	14.72
Bratislava	SKK	1	0.03	25.75	0.03	11.87
Brussels	EUR	1	1.21	12.43	1.00	–
Budapest	HUF	100	0.47	6.69	0.39	–5.09
Buenos Aires	ARS	1	0.33	5.30	0.27	–6.32
Bucharest	ROL	1	0.34	13.11	0.28	0.62
Caracas	VEB	100	0.05	–16.75	0.04	–25.94
Chicago	USD	1	1.00	0.00	0.83	–11.04
Delhi	INR	1	0.02	8.13	0.02	–3.81
Dubai	AED	1	0.27	0.09	0.23	–10.97
Dublin	EUR	1	1.21	12.43	1.00	–
Frankfurt	EUR	1	1.21	12.43	1.00	–
Geneva	CHF	1	0.77	5.49	0.64	–6.16
Helsinki	EUR	1	1.21	12.43	1.00	0.02
Hong Kong	HKD	1	0.13	0.68	0.11	–10.44
Istanbul	TRL	1	0.75	23.28	0.62	9.67
Jakarta	IDR	100	1.09	–3.04	0.90	–13.75
Johannesburg	ZAR	1	0.16	35.95	0.14	20.94
Kiev	UAH	1	0.20	7.83	0.17	–4.07
Copenhagen	DKK	1	0.16	11.99	0.13	–0.38
Kuala Lumpur	MYR	1	0.27	2.21	0.22	–9.08
Lima	PEN	1	0.30	6.13	0.25	–5.59
Lisbon	EUR	1	1.21	12.43	1.00	0.02
Ljubljana	SIT	100	0.50	8.53	0.42	–3.46
London	GBP	1	1.75	9.38	1.45	–2.70
Los Angeles	USD	1	1.00	0.00	0.83	–11.04
Luxembourg	EUR	1	1.21	12.43	1.00	–
Lyon	EUR	1	1.21	12.43	1.00	–
Madrid	EUR	1	1.21	12.43	1.00	–
Milan	EUR	1	1.21	12.43	1.00	–
Manama	BHD	1	2.66	0.24	2.20	–10.83
Manila	PHP	1	0.02	4.78	0.02	–6.79
Mexico City	MXN	1	0.09	1.28	0.08	–9.90
Miami	USD	1	1.00	0.00	0.83	–11.04
Montreal	CAD	1	0.87	30.77	0.72	16.33
Moscow	RUB	1	0.04	13.02	0.03	0.54
Mumbai	INR	1	0.02	8.13	0.02	–3.81
Munich	EUR	1	1.21	12.43	1.00	–
Nairobi	KES	1	0.01	7.57	0.01	–4.31
New York	USD	1	1.00	0.00	0.83	–11.04
Nicosia	CYP	1	2.10	n.a.	1.74	n.a.
Oslo	NOK	1	0.15	6.54	0.13	–5.23
Paris	EUR	1	1.21	12.43	1.00	–
Prague	CZK	1	0.04	24.30	0.03	10.58
Riga	LVL	1	1.74	0.98	1.44	–10.17
Rio de Janeiro	BRL	1	0.46	59.39	0.38	41.79
Rome	EUR	1	1.21	12.43	1.00	–
Santiago de Chile	CLP	100	0.19	40.28	0.16	24.79
Sao Paulo	BRL	1	0.46	59.39	0.38	41.79
Shanghai	CNY	1	0.12	2.91	0.10	–8.45
Seoul	KRW	100	0.10	23.65	0.09	10.00
Singapore	SGD	1	0.62	7.17	0.51	–4.66
Sofia	BGL	1	0.62	12.76	0.51	0.31
Stockholm	SEK	1	0.13	10.48	0.11	–1.72
Sydney	AUD	1	0.74	24.44	0.61	10.70
Taipei	TWD	1	0.03	7.91	0.03	–4.01
Tallinn	EEK	1	0.08	12.46	0.06	0.04
Tel Aviv	ILS	1	0.21	4.03	0.18	–7.46
Tokyo	JPY	1	0.01	1.62	0.01	–9.60
Toronto	CAD	1	0.87	30.77	0.72	16.33
Vilnius	LTL	1	0.35	12.48	0.29	0.06
Warsaw	PLN	1	0.31	22.28	0.26	8.77
Vienna	EUR	1	1.21	12.43	1.00	–
Zurich	CHF	1	0.77	5.49	0.64	–6.16

Source: Datastream, International Monetary Fund, Oanda

[1] Average exchange rates for period January–April 2006

Inflation (CPI) 2003–2006

City (countries)	2003	2004	2005
Amsterdam (Netherlands)	2.2	1.4	1.5
Athens (Greece)	3.5	3.0	3.5
Auckland (New Zealand)	1.8	2.3	3.0
Bangkok (Thailand)	1.8	2.8	4.5
Barcelona (Spain)	3.1	3.1	3.4
Beijing (China)	1.2	3.9	1.8
Berlin (Germany)	1.0	1.8	1.9
Bogotá (Colombia)	7.1	5.9	5.0
Bratislava (Slovakia)	8.5	7.5	2.8
Brussels (Belgium)	1.5	1.9	2.5
Bucharest (Romania)	15.3	11.9	9.0
Budapest (Hungary)	4.7	6.7	3.5
Buenos Aires (Argentina)	13.4	4.4	9.6
Caracas (Venezuela)	31.1	21.7	15.9
Chicago (United States)	2.3	2.7	3.4
Copenhagen (Denmark)	2.1	1.2	1.8
Delhi (New Delhi, India)	3.8	3.8	4.2
Dubai (United Arab Emirates)	3.1	4.6	6.0
Dublin (Ireland)	4.0	2.3	2.2
Frankfurt (Germany)	1.0	1.8	1.9
Geneva (Switzerland)	0.6	0.8	1.2
Helsinki (Finland)	1.3	0.1	0.9
Hong Kong (China)	–2.6	–0.4	1.1
Istanbul (Turkey)	25.2	8.6	8.2
Jakarta (Indonesia)	6.8	6.1	10.5
Johannesburg (South Africa)	5.8	1.4	3.4
Kiev (Ukraine)	5.2	9.0	13.5
Kuala Lumpur (Malaysia)	1.1	1.4	3.0
Lima (Peru)	2.3	3.7	1.6
Lisbon (Portugal)	3.3	2.5	2.1
Ljubljana (Slovenia)	5.6	3.6	2.5
London (Great Britain)	1.4	1.3	2.1
Los Angeles (United States)	2.3	2.7	3.4
Luxembourg (Luxembourg)	2.0	2.2	2.5
Lyon (France)	2.2	2.3	1.9
Madrid (Spain)	3.1	3.1	3.4
Manama (Bahrain)	1.7	2.3	2.6
Manila (Philippines)	3.5	6.0	7.6
Mexico City (Mexico)	4.5	4.7	4.0
Miami (United States)	2.3	2.7	3.4
Milan (Italy)	2.8	2.3	2.3
Montreal (Canada)	2.7	1.8	2.2
Moscow (Russia)	13.7	10.9	12.6
Mumbai (Bombay, India)	3.8	3.8	4.2
Munich (Germany)	1.0	1.8	1.9
Nairobi (Kenya)	9.8	11.6	10.3
New York (United States)	2.3	2.7	3.4
Nicosia (Cyprus)	4.1	2.3	2.6
Oslo (Norway)	2.5	0.4	1.6
Paris (France)	2.2	2.3	1.9
Prague (Czech Republic)	0.1	2.8	1.8
Riga (Latvia)	2.9	6.3	6.7
Rio de Janeiro (Brazil)	14.8	6.6	6.9
Rome (Italy)	2.8	2.3	2.3
Santiago de Chile (Chile)	2.8	1.1	3.1
Sao Paulo (Brazil)	14.8	6.6	6.9
Seoul (South Korea)	3.6	3.6	2.7
Shanghai (China)	1.2	3.9	1.8
Singapore (Singapore)	0.5	1.7	0.5
Sofia (Bulgaria)	2.3	6.1	5.0
Stockholm (Sweden)	2.3	1.1	0.8
Sydney (Australia)	2.8	2.3	2.7
Taipei (Taiwan)	–0.3	1.6	2.3
Tallinn (Estonia)	1.3	3.0	4.1
Tel Aviv (Israel)	0.7	–0.4	1.3
Tokyo (Japan)	–0.3	0.0	–0.3
Toronto (Canada)	2.7	1.8	2.2
Vienna (Austria)	1.3	2.0	2.1
Vilnius (Lithuania)	–1.2	1.2	2.6
Warsaw (Poland)	0.8	3.5	2.1
Zurich (Switzerland)	0.6	0.8	1.2

Source:International Monetary Fund

[1] Modification of the consumer price index (CPI) January 2003–January 2006

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