

Market overview for elevator products and services



Aggregate global demand for elevator / escalator products and services is projected to increase 5.6% per year through 2009 to more than \$20 billion. Fueling gains will be economic recovery and expansion in the mature markets of the developed world, coupled with ongoing industrialization among the less advanced countries of Asia.

The world elevator market rose at a relatively healthy pace throughout most of the 1990s in a generally sanguine global macroeconomic climate. Basically strong economic growth in developing countries was briefly interrupted in 1997-1998 by a financial crisis engulfing many East Asian and Latin American nations, as well as Russia. Fallout from the crisis continued to adversely impact the elevator market into 1999 and 2000, as trends in the elevator market tend to lag developments in the macro economy by a few years. Subsequently, as the emerging market began to recover, growth in Western Europe and North America was depressed in the wake of the global economic slowdown precipitated in the US, although by 2004 a recovery was apparent in most markets.

In the developed world, gains will reflect an expected recovery in office construction, as vacancy rates come down in major global financial centers such as Tokyo and London. Over the long term, development of the residential sector, especially in the largely untapped US market where single-family homes predominate, will also create opportunities, supported by aging populations and regulations such as the Americans with Disabilities Act. In Europe, adoption of new EU-wide safety regulations for existing lifts will bolster the modernization/upgrade service segment.

The fastest growth is anticipated in the world's developing regions – Asia, Latin America, Eastern Europe, Africa and the Middle East. In developing countries, market expansion will reflect increased urbanization, as virtually all structures in large third-world cities require elevators. Aftermarket services are also not well established, even in more developed countries such as South Korea and hence offer a sizable potential market which major global suppliers such as OTIS are actively working to develop.

China, which has already emerged as the largest global elevator market in unit terms, will continue to log explosive gains, with the genesis of a lucrative service aftermarket bolstering the robust OEM business. Almost half of the increase in passenger and freight elevator unit sales will be attributable to China, where per capita elevator use remains less than 10% of that typical of Western Europe.

TABLE III – 1

WORLD ELEVATOR MARKET BY REGION

(billion dollars)

Item

1994

1999

2004

2009

2014

World Urban Population (mil persons)

2516

2811

3119

3443

3790

Bldg. Construct Expend (bil 2000\$)

2900

3324

4254

5270

6661

\$ elevator/urban capita

10

11

12

15

17

\$ elevators/000\$ construct

8. 6

9. 0

9. 1

9. 6

9. 9

World Elevator Market

24. 9

30. 0

38. 5

50. 5

66. 2

North America :

4. 0

5. 0

5. 8

7. 4

8. 9

United States

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3. 6

4. 5

5. 1

6. 5

7. 8

Canada & Mexico

0. 5

0. 5

0. 7

0. 8

1. 1

Western Europe :

11. 7

13. 8

16. 1

19. 3

23. 0

Asia/Pacific :

6. 5

8. 0

12. 4

18. 4

27. 0

China

0. 9

1. 2

3. 5

6. 9

12. 3

Japan

4. 5

5. 3

6. 4

7. 9

9.5

India

0.4

0.6

1.2

1.7

2.5

Other Asia/Pacific

0.7

0.9

1.3

1.9

2.7

Other Regions :

2.7

3.2

4.2

5. 5

7. 4

Latin America

1. 0

1. 1

1. 4

1. 9

2. 5

Eastern Europe

1. 2

1. 4

1. 8

2. 3

3. 0

Africa/Midest

0. 5

0. 7

1. 0

1. 3

1. 9

Source : The Freedonia Group, Inc.

CHART III – 1

WORLD ELEVATOR MARKET BY REGION, 2009

(\$50. 5 billion)

Source : The Freedonia Group, Inc.

3. 1. 1 Regional Profile

Given the modernized economies, well-developed industrial and commercial sectors, prosperous consumer populations and highly evolved building/nonbuilding construction infrastructures in place throughout the developed world, most OECD (Organisation for Economic Co-Operation and Development) countries maintain large markets for elevator/escalator products and services relative to population and size of the economy. These include the US, Western Europe, Japan (the largest global market in value terms, reflecting the country's aged, urban population and stringent safety standards) and Australia and New Zealand. The nations of Eastern Europe, especially Russia and certain of the other more industrialized states of the former Soviet Union, also comprise markets of some significance, but they tend to be much smaller in both absolute and relative terms than those of the major Western countries.

However, the fastest growing markets for elevator products and services are typically found within the developing regions, especially Asia and to a lesser extent Latin America and Africa/Mideast as well. As numerous countries within these regions work to industrialize their economies, they are facing rising infrastructure expansion and modernization requirements, which has led to extensive building construction activity.

Another key aspect of the industrialization process in most countries is increasing urbanization, as individuals and households migrate from rural areas to cities to participate in the growing economic opportunities available there. Such dynamics are positively correlated to the development of markets for construction-related products like elevator systems; moreover, as the number of systems installed increases, markets for related maintenance/repair and eventually modernization, services tend to emerge as a matter of course.

3. 1. 2 Multinational Parameters & Trade Flows

Like most industries, the elevator business has become increasingly international in scope in recent decades. The physical nature of elevator / escalator system largely, bulky, involving numerous component parts, etc., renders them not easily transportable. In addition, elevator manufacturers often prefer to have local manufacturing capacity, which allows them to better satisfy local requirements (e. g., regulations and standards) and cultivate lucrative aftermarket service relationships. As such, foreign trade per se is not as extensive in the industry as in most durable goods manufacturing businesses. Foreign trade is some what more prevalent in the replacement parts and components segments of the business.

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However, multinational investment on part of the leading producers (and even a few of the mid-sized and smaller ones) is extremely prevalent. This takes the form of direct ownership of overseas based subsidiaries, manufacturing facilities and other assets and after sales servicing and technical support networks. Moreover, in recent years there has been an effort on the part of major producers such as OTIS and KONE to consolidate their global operations and shift production capacity to lower cost venues in the developing world, which has increased the importance of cross-border trade.

As the global elevator industry continues to restructure and consolidate, the home base of operations of the major players is becoming increasingly less relevant to the competitive dynamics of the business, with a handful of multinational companies dominating the business in most geographic areas – especially with respect to product manufacturing. The service segment remains considerably most fragmented, but it too is consolidating rapidly. As global companies manufacturer and install their systems in given countries, they have a direct incentive to invest in after sales servicing networks in these countries as well, which is also prompting consolidation in the service segment of the business. Such dynamics are expected to become more rather than less pronounced going forward, as the economics of the business favor large companies with a multinational reach.

3. 2 Demand by Product & Service

Elevators, escalators and related products are used to physically move individuals, freight and sometimes other items from one place to another within a building, facility or some other designated place. The movement <https://assignbuster.com/market-overview-for-elevator-products-and-services/>

occurs either vertically (in the case of elevating and lifting equipment), at an incline (escalators) or horizontally (moving walkways). Elevators and escalators are thus integral components of many types of structures, especially those with multiple floors or levels and/or involving an extensive amount of physical space.

Aggregate world demand for elevator products and services is projected to increase 5.6% per year through 2009 to more than \$50 billion, an improvement from the 1994-2004 pace. Fueling gains will be an upswing in new system installations, accompanying expected recovery in nonresidential building activity in Japan, Western Europe and the Americas. This will help to offset some slowing in residential building construction, which is an important indicator of elevator demand outside of North America.

Preventing faster gains - especially on the products side is the high degree of maturity of the elevator / escalator market in the developed world, which has prompted leading vendors to target high growth markets in the Pacific Rim and other developing areas which hold the greatest potential for incremental increases in new installations going forward.

Also fueling growth will be technological innovations in letter generation system including microprocessor based controls and sensors, remote monitoring, automated performance and generate further demand, at both the new installation and modernization/upgrade ends of the business. In addition, retrofits to comply with changing building codes and federal mandates will rejuvenate the upgrade/modernization services market, especially in North America and Western Europe.

TABLE III – 2**WORLD ELEVATOR EQUIPMENT & SERVICE MARKET****(billion dollars)****Item****1994****1999****2004****2009****2014**

Bldg Construct Expend (bil 2000\$)

2900

3324

4254

5270

6661

\$ elevators/000\$ construction

8. 6

9. 0

9. 1

9. 6

10. 0

World Elevator Market

24. 9

30. 0

38. 5

50. 6

66. 3

Equipment :

8. 8

10. 9

15. 0

21. 2

29. 5

Passenger & Freight

6. 2

7. 5

10. 2

14. 1

19. 0

Escalators & Moving Walkways

0. 8

1. 0

1. 6

2. 6

4. 0

Parts & Other

1. 8

2. 4

3. 2

4. 6

6. 6

Services :

16. 1

19. 1

23. 5

29. 3

36. 8

Installation

2. 6

3. 2

4. 1

5. 5

7. 3

Modernization & Repair

13. 4

16. 0

19. 4

23. 8

29. 5

Source : The Freedonia Group, Inc

CHART III-2

WORLD ELEVATOR EQUIPMENT & SERVICE MARKET, 1994-2014

(billion dollars)

Source : The Freedonia Group, Inc.

3. 2. 1 Equipment

World demand for elevator and escalator products totaled \$15 billion in 2004 billion in 2004, accounting for approximately 40% of the total elevator/escalator market. For present purposes, elevator products are defined to include passenger and freight elevators and associated products.

Demand is projected to post a 7. 1% per annum increase through 2009 to \$21. 2 billion. Growth will stem from improving cyclical dynamics, in particular a revival in nonresidential construction spending – especially in the key office/commercial/lodging and industrial building sectors. Gains will be best for machine room less (MRL) elevators, which will benefit from expansion of the global retail and (especially) transportation sectors.

3. 2. 2 Passenger & Freight Elevators

Global demand for passenger and freight elevators is projected to rise 5. 7% per annum through 2009 to almost 4, 40, 000 units, of which over 60% will be the newer machine room less (MRL) type. Along with improving cyclical dynamics and continued secular growth in the developing world, gains will be fueled by increased penetration of less traditional market segments, such as single-family residences. The latter is a key consideration in North America, where single family housing is more prevalent than in Europe and

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Asia. Even in the latter regions, however, again of the population will create opportunities in the residential segment, as elevators are increasingly designed into low-rise buildings which would previously have relied exclusively on staircases. As a result, the installed base will expand from 7.4 million units in 2004 to 9.2 million in 2009.

In value terms, demand for passenger and freight elevators will grow 6.6% per year to \$14 billion in 2009. While intense global competition and greater reliance on low footprint units will hold down cost increases, higher fuel and energy costs and the expanding technical complexity of latter generation elevator system, which can be priced at a premium relative to earlier designs, will contribute to price inflation.

Passenger and freight elevators, as the name implies, are general purpose lifting systems designed to vertically transport individuals and commodities between different floors or levels within a single building or facility. From a technological standpoint, essentially all modern passenger and freight elevators are either the hydraulic (powered by pressurized liquid) or traction (electric powered) type; the latter can be either geared or gearless.

Hydraulic came into prominence during the 1950s surpassing the geared market which was prominent prior to that time and remain the dominant type in the US. Traditional traction elevators remain in broader use in Europe and Asia, although in Europe they have been widely supplanted by MRLs since the mid 1990s.

The newer MRL elevator types incorporate the gears and control into the elevator shaft, rather than a separate machine room, and hence provide

greater design flexibility, as well as energy and (in some cases) cost savings. MRLs have made significant inroads in Western Europe and will continue to penetrate North America, Asia and other regions. Moreover, while initially suited only for buildings upto 7 stories, MRLs have not been adapted for use upto about 25 stories, substantially broadening the potential market.

TABLE III – 3

WORLD PASSENGER & FREIGHT ELEVATOR MARKET

(million dollars)

Item

1994

1999

2004

2009

2014

World Elevator Market

24893

30015

38536

50550

66300

% Passenger & Freight

24. 8

25. 1

26. 5

27. 8

28. 6

Passenger/Freight Elevator Market

6175

7532

10220

14050

18950

North America :

665

977

1160

1700

2100

United States

585

873

1000

1480

1800

Canada & Mexico

80

104

160

220

300

Western Europe

2155

2645

3125

3940

4850

Asia/Pacific :

2575

2975

4660

6650

9525

China

425

550

1600

2800

4700

Japan

1650

1800

2000

2325

2700

India

220

305

470

745

950

Other Asia/Pacific :

280

320

590

780

1175

Other Regions :

780

935

1275

1760

2475

Latin America

305

360

450

615

840

Eastern Europe

265

275

425

595

825

Africa/Midest

210

300

400

550

810

000\$/Unit

31.8

33.0

30.8

32.0

33.0

P/F Elevator Market (000 Units)

194

228

332

439

575

Machine Room

194

203

232

164

100

Machine Room Less

—

25

100

275

475

% New

3.8

3.8

4.5

4.8

4. 9

P/F Elev. Installed Base (000 Units)

5120

6035

7355

9220

11700

Source : The Freedonia Group, Inc.

Elevator related service revenues are generated when new systems are installed and then subsequently as installed systems are repaired and maintained over their useful lives. Major renovations or upgrades on existing systems are often undertaken as well; for present purposes this type of activity is classified under repair/modernization. Not surprisingly given their much larger installed base, elevating/lifting systems account for a substantially higher share of the total service market than escalators and moving walkways, in both the new installation and repair/modernization segments.

TABLE III – 4**WORLD ELEVATOR SERVICE MARKET BY TYPE****(billion dollars)****Item****1994****1999****2004****2009****2014**

World Elevator Market

24893

30015

38536

50550

66300

% Services

64. 6

63. 7

61. 0

58. 0

55. 5

Elevator Service Market

16. 1

19. 1

23. 5

29. 3

36. 8

Installation

2. 6

3. 2

4. 1

5. 5

7. 3

Repair & Modernization

13. 4

16. 0

19. 4

23. 8

29. 5

Repair & Maintenance

11. 6

13. 5

15. 8

18. 3

21. 0

Modernization/Upgrade

1. 8

2. 5

3. 6

5. 5

8. 5

Source : The Freedonia Group, Inc.

3. 2. 3 Installation

World revenues generated from the installation of new elevator/escalators systems are projected to increase 6. 1% per year through 2009 to \$5. 5 billion. Installation revenues will grow somewhat more slowly than will new elevator and escalator equipment demand. This reflects the fact that elevator/escalator vendors have been working aggressively in recent years to lower the installation costs of their system, in orde3r to increase new business volume.

TABLE III – 5

WORLD ELEVATOR INSTALLATION REVENUES BY REGION

(million dollars)

Item

1994

1999

2004

2009

2014

World Elevator Service Market

16079

19118

23491

29300

36800

% Installations

16. 5

16. 5

17. 4

18. 8

19. 7

Installation Revenues

2650

3153

4087

5500

7245

North America :

372

484

530

735

880

United States

338

440

464

650

765

Canada & Mexico

34

44

66

85

115

Western Europe

963

1162

1350

1670

2020

Asia/Pacific :

1093

1236

1831

2570

3600

China

144

188

563

1025

1725

Japan

752

804

872

990

1120

India

87

126

168

255

345

Other Asia/Pacific :

110

128

228

300

410

Other Regions :

222

271

376

525

745

Latin America

81

97

123

170

235

Eastern Europe

80

86

134

190

265

Africa/Midest

61

88

119

165

245

Source : The Freedonia Group, Inc.

3. 2. 4 Repair & Modernization

Revenues derived from the provision of repair, maintenance and upgrade/modernization services on existing elevator/escalator system are projected to increase 4. 2% per annum through 2009 to \$23. 8 billion, which compares favorably to longer term historical norms.

Repair and maintenance revenues will expand just 3. 0% per annum to \$18. 3 billion in 2009, trailing all other product and service segments. In much of the developing world, maintenance spending is perceived as an unaffordable luxury; building owners and managers tend to wait for an elevator to fail before they will invest in maintenance/repair. However, there is evidence that this is beginning to change as major Western and Japanese elevator companies work to educate their equipment customers about the importance of routine servicing. Service requirements tend to be highest in Japan, where for cultural reasons elevator failures are considered to be unacceptable.

As in case of elevator and escalator systems themselves, the provision of related repair/maintenance services has benefited significantly in recent years from the application of a advanced technology. What has become especially prominent of late are computer based monitoring tools that can detect system faults (or even potential faults) and alert service technicians immediately. Repair/maintenance services can be performed on a contract basis, or on an as needed service call basis for building owners and other operators that do not maintain contracts.

In addition, there is considerable potential for business activity on the modernization upgrade side of this market, in terms of retrofitting existing systems to be compatible with new building codes, the Americans with Disability Act (in the US), the safety Norm for Existing Lifts 9SNEL-in Western Europe) and other mandates. A number of the leading elevator vendors have in recent years launched modernization packages designed specifically to comply with the requirements of these mandates. Examples include Schindler's SCHINDLER 6200 and KONE's MAXISPACE. The latter allows users to replace a 4 passenger car with a 6 or even 8 passenger lift.

More generally, numerous building owners will want to upgrade existing elevator/escalator systems to incorporate the latest technological advances along such parameters as improved safety and enhanced performance and energy efficiency characteristics, and this will provide further momentum to the repair/modernization service market overall. Modernization revenues are forecast to rise 8. 8% annually through 2009 to \$5. 5 billion, making this the fastest growing segment of the elevator business. Modernization projects can range from replacing controls and interior fittings, to installing new doors

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or other structural components, to incorporating advanced electronics based sensors and monitoring tools, to complete renovations of entire elevator cabs or replacement of escalator stairs.

TABLE III – 6

WORLD ELEVATOR REPAIR & MODERNIZATION REVENUES BY REGION

(million dollars)

Item

1994

1999

2004

2009

2014

World Elevator Service Market

16079

19118

23491

29300

36800

% Repair & Modernization

83.5

83.5

82.6

81.2

80.0

Repair & Modernization

13429

15965

19404

23800

29450

North America :

2518

2981

3529

4190

5025

United States

2217

2646

3145

3735

4485

Canada & Mexico

301

335

384

455

540

Western Europe

7731

8918

10355

12115

14240

Asia/Pacific :

1848

2492

3609

5110

7165

China

55

110

270

645

1350

Japan

1516

1957

2664

3430

4275

India

42

95

210

410

745

Other Asia/Pacific :

235

330

465

625

795

Other Regions :

1332

1574

1911

2385

3020

Latin America

472

554

688

865

1095

Eastern Europe

742

852

983

1180

1445

Africa/Midest

118

168

240

340

480

Source : The Freedonia Group, Inc.

3. 3 Demand by Market

Elevator related products and services are utilized in a broad array of buildings and facilities featuring multiple floors or levels, as well as in certain single-floor and even non-building type settings. Large, well-trafficked facilities with multiple levels – office buildings, institutions such as hospitals and schools, department stores and other retail establishments, hotels and motels, factories and warehouses, etc., tend to be the most intensive users of elevator products and services.