

- Technology Sector Strategy: Diversification Is Warranted** **3**  
*Vadim Zlotnikov*      Absence of significant misvaluations favors portfolio diversification; defensive posture preferred  
Consolidation in distribution and catch-up by laggards in semi equipment offer best opportunities
- Technology Sector Strategy: Fundamentals and Valuation** **7**  
*Vadim Zlotnikov*      Inventories lean despite decelerating demand, creating order upside for non-PC semiconductor suppliers  
Small cap rebounded in 2Q:97, with best opportunities in services, systems, and semiconductor industries
- Viacom's Blockbuster Stuck by Smut, Price, and Distribution Problems** **11**  
*Tom Wolzien*      Adult video subsidy to competitors and distribution problems all squeeze Blockbuster  
*Suk Han*  
*John Penney*      Argue for separation of video business from remainder of Viacom; balance worth mid-\$30s; outperform
- BankAmerica and Wells Fargo: Traveling Together** **15**  
*Ronald I. Mandle*      BAC's ROE should climb, aided by business mix enrichment, enhanced consumer sales efforts; outperform  
WFC's EPS should rebound strongly in 2H from 2Q revenue trough, good buying opportunity; outperform
- VW: Momentum Building** **19**  
*Robert M. Sigler*      Building EPS momentum, as key volume models (Golf IV) are launched over restructured cost base  
Earnings revisions to continue the upward trend, with the stock price to follow; outperform
- Barr Exam: Handicapping the Interconnection Order Case** **23**  
*Tod A. Jacobs*      Current regulatory regime worst of all worlds for LECs; incremental changes portend upside  
*Carl E. Walker*      Local companies favored on valuation, fundamentals a shot at regulatory betterment; USW, AIT outperform

# VW: Momentum Building

Stock	7/2 Price	SCB Rating	YTD Rel. Perf.	52-Week Range	EPS			P/E		Current Yield
					1996	1997E	1998E	1997E	1998E	
VW (DM)	1,345	O	77%	495 - 1,349	55	75	100	17.9x	13.5x	0.7%
VW (ADR)	\$153	O	63	\$67 - \$153	\$7.31	\$8.90	\$12.05	17.2	12.7	0.5

## Overview

Volkswagen is building earnings momentum, and therefore stock price momentum, as key volume models are launched over the restructured cost base. On the back of already strong sales this year, VW will launch its highest-volume replacement model in October — the new Golf IV. It promises to be the best offering in its class and is expected to hit the “competitive zone” of the B/C model segment hard with superior content and competitive pricing. In addition to leading the cost battle in Europe, the company is enjoying strong product reception at home and abroad. While earnings at other automotive manufacturers are peaking or struggling, VW is set to drive operating margins to 5-6% and pretax margins 6-8% by 2001. We expect earnings revisions to continue their upward trend and the stock price to follow, and rate VW outperform.

## Sales growth strong

VW is on track to deliver 35-40% earnings growth this year. For the first five months of 1997, the company has seen sales increase by 9.2%, totaling 1.8 million units. Sales momentum has been maintained with model launches such as the Passat, A3, and A6. The key market of western Europe has posted a sales increase of 2.6%, despite a poor performance in Germany, which was partly due to a weak market and the anticipated arrival of the superior new Golf IV this October. Sales gains outside of Europe have exceeded our expectations, with over 20% year-over-year growth in the first quarter. CEO Dr. Peich has said that he expects sales to total approximately 4.4 million units in 1997, an increase of 8-10% above last year's mark.

## The new Golf IV

Vital to the success of VW has been the introduction of new models and its efforts to consolidate platforms. The Passat estate (in June) and Polo estate

(September) are the preludes to VW's biggest launch this year — the Golf IV (see Exhibit 1).

Competition for market share primarily focuses on product design and price. VW has constantly led the way in Europe with innovative designs and production techniques. Loyalty for the VW marque has been strong due to vehicle content and sticker prices. The Golf has historically been the largest seller in the VW stable with approximately 800,000 units sold in 1996.

## Exhibit 1 VW: Key European Model Launches

Model	Launch	% of 1997 Volume
Golf IV	Oct. 1997	26%
Polo & Estate	1994 & Sept. 1997	23
Passat	Sept. 1996	1
Passat Estate	June 1997	7
A3	Sept. 1996	5
A6	Mar. 1997	3
Arosa	Nov. 1996	1
Toledo	Jan. 1998	2
Total		68%

Source: Corporate reports and Bernstein estimates.

## Competitive landscape

The Golf IV is intended to assault existing and new competition in the “competitive zone” of the B/C model segments. Ford came out with the new Escort last year, and GM plans to release the Astra replacement at the same time as the Golf IV. The Astra is the second largest volume model in Europe, and GM is attempting to go toe-to-toe with the Golf. Although the Astra will have four-cylinder engine variations and several breaks that include Cabriolet and wagon versions, the content and design appear to fall short of that of the new Golf IV. VW's continued aggressive stance on content and price (supported by improving margins on the back of excellent cost reductions) crests in the new Golf IV and leaves a tough road ahead for GM.

For the most part, designs are fresh among the competitors in the B/C segment, with the exception of the Ford Escort. In 1996, it was redesigned with a slight variation in style and content. Among competitors, it is at the greatest disadvantage. Industry sources report the Escort's design is not eye-catching and it has limited engine variations. The redeeming quality for the Escort is its relatively cheap price compared to other autos in the segment. Settled in the middle of the pack are the French models PSA 306 and Citroen ZX (see Exhibit 2).

GM's Astra is a refreshed model that has been assigned to directly compete with the Golf IV. The Astra has updated stylings, considerable content, and favorable options. However, it lacks the reputation that the Golf has enjoyed since the late seventies. Breaks from the Golf model consist of the Jetta/Vento, Cabrio, and Carrado. These versions have enjoyed success and customer loyalty unlike any of the other competitors. In addition, engine quality and variation appeal to a wide range of customers. The 4-cylinder version represents the standard in the group, with the VR6 adding power to sports models. The new 5-cylinder 20-valve 2.0-liter model will represent a specialty engine for the Corrado replacement.

The Golf offers a lot of value for the dollar, including cassette stereo, A/C, power steering, power locks, and power windows among its many standard features. In some cases, having packed as much as possible on the inside, VW has even offered skis, snowboards, and mountain bikes as standard equipment. The Golf seems to have a superior design, reputation for quality, variation of product, and ve-

hicle content that allow the product to remain the leader in Europe.

In the European A segment, the current Polo has been in the market since 1994. An all-new version is not due until after the turn of the century. With the release of Ford's Ka, the Polo model is vulnerable to sales deterioration. Other competitors come in the form of the Ford Fiesta and the Fiat Punto. Preservation of Polo's volumes will be helped by the addition of a the new Polo wagon later this year. In the very profitable luxury segment, Audi has continued its offensive on BMW, Mercedes, and Volvo. The releases of the A3 and A6 have cut into competitors' volumes. With innovative designs that include varied and powerful engines, improved handling, and a superior pricing, other luxury auto makers are seeing the migration of customers to Audi.

#### Successful product leverages improved cost basis

The new Golf IV is a showcase for VW's achievements in cost cutting through supplier and platform consolidation. It is the central model on the VW A platform, which it shares with the A3, Octavia, and Toledo. This model has historically been the largest seller in the VW stable, with approximately 800,000 units sold globally in 1996.

Through the sharing of platforms, production time of all models has been cut almost in half. The new Golf's assembly time is currently 15 hours, requiring only about half the labor content of the Golf III, with the A3 having the shortest luxury assembly time taking only 20 hours. Further, the use of a modular construction process in the platform has allowed VW to take advantage of economies of scale and decrease its supplier base. The cost savings are staggering when considering the 2 million units that are projected to be produced on the platform.

Dr. Peich has stated that the company will consolidate its current 16 platforms down to 4 by 2001. A vehicle platform consists of a floorpan, front end, gears, axles, engine, and gear box. On average, about 60% of the components can be standardized globally, thus saving substantial development and production costs. It is estimated that VW's A0, A, and B/C platforms will be the basis for 3 million units and a minimum of 15 models by 2000. The company has stated that by the end of 1997 it will have achieved 30% of its goal. The aim is to decrease development

**Exhibit 2 Stacking up the Competition in the European B/C Segment**

	Golf IV	Astra	Escort	PSA 306	Citroen ZX
	1997	1997	1996	1997	1997
Age of Design					
Breaks: 3-D hatch					
5-D hatch					
4-D sedan					
Estate					
Coupe					
Convert					
MVP					
Engines: 4 cylinder					
5 cylinder					
6 cylinder					
diesel					
Front Wheel					
All Wheel					
Design	Good	Good	Good	Good	Good
Content	Excellent	Good	Poor	Good	Good
Price	Moderate	Moderate	Cheap	Moderate	Moderate

Source: AID, AEN, *Automotive Industries' Insider*, corporate reports and Bernstein estimates.

and assembly time and to lower prices in the form of more vehicle content.

For the first quarter, VW has Europe's top-selling platform and three of its top 10 (see Exhibit 3). Leading the way is VW's supermini platform, which includes the VW Polo, Seat Ibiza and Cordoba, and van derivatives. The platform family has recently been expanded, with the addition of the Cordoba wagon and Seat's Arosa mini. The Golf platform is expected to move into the top spot by year-end 1998, when its updated platform is released and when Skoda's Octavia and Audi's A3, TT Coupe, and TTS Convertible are added. Estimates are that the Golf will be the first platform (A) to have 1 million unit sales in Europe. VW also has the only large-car platform that ranks in the top ten; the platform is the basis for the Passat, A4, and A6.

Some of the models converted to one of the four platforms include the Passat and Estate version (B platform), the A3 (A), and the Polo (A0). Demand for these vehicles has been so strong (see Exhibit 4) that production is at maximum levels. In the case of the Passat, initial demand was so robust that it is likely to exceed its initial sales estimate of 300,000 units by 100,000.

**Exhibit 3 Western Europe Top Platforms 1Q:97**

1. VW A0 (supermini)		6. Fiat Type C	
Model	Sales	Model	Sales
VW Polo	136,662	Fiat Brava/Bravo	71,188
Seat Ibiza	42,545	Fiat Marea	32,789
Seat Cordoba	16,568	Fiat Coupe	3,735
Inca/Caddy	16,761	Alfa 145/6	25,455
Platform Sales	212,536	Alfa 155	5,012
2. Fiat B-Type		Spider /GTV	3,006
Punto	166,247	Lancia Delta	4,093
Barchetta	1,738	Lancia Dedra	4,451
Lancia Y	28,821	Platform Sales	149,729
Punto van	3,845	7. GM Lower-Medium	
Platform Sales	200,651	Astra	142,464
3. Volkswagen A		Vans	3,733
VW Golf	149,533	Platform Sales	146,197
VW Vento	9,215	8. PSA Supermini	
Seat Toledo	12,710	Citroen Saxo	59,691
Platform Sales	171,458	Peugeot 106	76,049
4. Ford B91		Vans	5,030
Fiesta	108,301	Platform Sales	140,770
Courier & Van	13,299	9. Volkswagen B4	
Ford Ka	43,575	VW Passat	57,805
Mazda 121	5,563	Audi A4	68,440
Platform Sales	170,738	Platform Sales	126,245
5. GM supermini		10. Renault Megane	
Corsa	132,135	Hatch/Sedan/Coup/	123,415
Tigra	12,033	Scenic	
Vans	12,928		
Platform Sales	157,096		

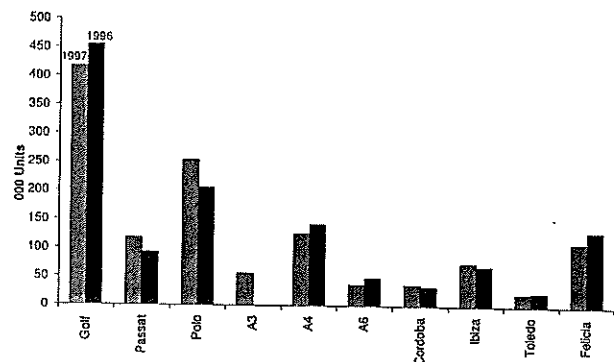
Source: AEN, corporate reports and Bernstein estimates.

Also included on the A platform will be the new Beetle, scheduled for release next fall. It is estimated that its production will be 100,000 units annually, sold primarily in the North America market. The Beetle is not priced as a nostalgic car, but as a volume model, at 10% above the Golf. Considering that the Beetle is just one of the many spinoffs from the A platform, where about 60% of all parts are shared, its margins will be significant. Market perception on the success of the car has been mixed. However, do not underestimate the image value and the ability of VW to increase production if demand is strong. The concept car and later show cars attracted much attention.

**Impact of purchases on margins**

We believe that VW will be able to maintain its momentum and to further slow the growth in purchased costs to about 0.5% using platform synergies. This adds a conservative estimate of DM1.5 billion, or over 1%, to operating margins by 2001. The company has already introduced a number of shared products on its B/C base, including the Passat, A6, and Passat estate (approximately 1 million in production). On the VWA platform, approximately 2 million units will be more efficiently produced as the Golf joins the launched A3 cost basis. VW is set to grow operating margins rapidly in the very competitive European market — from about 1% this year to about 2.5% in 1998 (see Exhibit 5). If the company successfully moves 4+ million global units to four platforms by 2001 and slows the advance of variable costs even further, operating margins will strengthen and VW can easily break the 6-8% pretax margin hurdle set by management.

**Exhibit 4 VW: Model Sales Breakdown — January-May**



Source: AID and AEN.

### Exhibit 5 Volkswagen: Sales and Operating Margins (DM million)

	1995	1996E	1997E	1998E	2001E
European Auto Sales	50,293	56,824	60,222	64,624	72,786
Non-Euro. Auto Sales	25,490	29,283	31,233	33,441	40,413
Financial Leasing & Other	12,337	14,017	14,888	15,964	18,428
Consolidated Sales	88,119	100,123	106,343	114,028	131,627
European Auto Oper. Inc.	(714)	(665)	478	1,645	4,578
Non-Euro. Auto Oper. Inc.	584	757	886	1,068	2,556
Financial Leasing & Other	245	293	331	377	650
Consolidated Operating Income	115	385	1,695	3,090	7,785
Declared Earnings	336	678	1,667	2,625	5,758
DVFA Earnings	744	1,886	2,567	3,475	6,627
<b>Auto Units and Sales (000s)</b>					
Total Vehicle Unit Sales	3,408	3,791	3,921	4,070	4,494
European Vehicle Unit Sales	2,048	2,304	2,347	2,431	2,628
Rest of World Vehicle Unit Sales	1,360	1,488	1,574	1,639	1,867
<b>Operating Margins</b>					
European Auto Oper. Inc.	(1.4)%	(1.2)%	0.8%	2.5%	6.3%
Non-Euro. Auto Oper. Inc.	2.3	2.6	2.8	3.2	6.3
Financial Leasing & Other	2.0	2.1	2.2	2.4	3.5
Total	0.1%	0.4%	1.6%	2.7%	5.9%

Source: Corporate reports and Bernstein estimates.

#### Employment settlement

With materials costs well under control, management has a keen eye on addressing labor cost issues. VW's efforts to rationalize and regulate growth of its labor structure are essential as production efficiencies improve, because they can provide additional earnings strength in the out-years.

The company recently negotiated an agreement with the IG Metall trade union that allows the company to reduce its workforce through an early retirement program. The plan will allow workers at the age of 55 to work part time and receive 85% of their net pay until age 57 1/2. At that time workers will stop working, but still receive 85% of their pay until age 60. It is estimated that the plan will affect 10,000 employees at a cost of approximately DM150,000 per employee. In addition, VW agreed to a 1.5% wage increase from Aug. 1, 1997, with a 2.5% increase in August 1998. This agreement continues VW's trend to reduce and refresh the labor force at a time when European labor relations and negotiations can offer substantial operating risk.

Since 1991, VW has cut around 45,000 jobs at factories in Germany (see Exhibit 6). Massive overstaffing in 1994 led to the introduction of a four-day work week at Ger-

### Exhibit 6 VW: Headcount Estimates (000s)

	1995	1996	1997E	1998E
Employees in Germany	138	135	134	133
Employees Rest of World	99	100	100	100
Apprentices	3.9	3.7	2.9	3.0

Source: Corporate reports and Bernstein estimates.

man plants. Under the agreement, the basic 28.8 hour work week can be extended to 38.8 hours as required without overtime being paid, and 12 special Saturdays shifts also at the regular wage rate.

From 1993 to 1995, output climbed by 12.9%, while the workforce shrank by 6.7%. Recently, Audi announced that it could possibly employ an additional 1,000 employees this year to service the demand for its A3 and A6. However, this will have little effect on the net employment base, as numbers are trimmed from underutilized capacity at Seat and VW de Mexico.

#### Risks

The primary risk to VW would be the failure of a key product launch. In particular, a successful rollout of the Golf IV in the fourth quarter will be essential in maintaining sales, earnings, and price momentum in 1998. Although indications are that the Golf IV is being eagerly awaited by consumers, aggressive pricing initiatives by GM for its new key Astra model launch could pressure demand.

#### Investment Conclusion

VW has outpaced its competitors with a constant flow of new products, substantial cost cutting, and improving capacity utilization. We believe that earnings revisions for VW will continue to rise (see Exhibit 7), as the company completes its platform consolidation initiative with key product introductions and strong global growth. We estimate 1997 EPS to be DM75, above the consensus of DM68. In 1998, we are expecting DM100, while the consensus looks for about DM90. VW is rated outperform.

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### Exhibit 7 Upward Movement in the Revisions of VW's Earnings Estimates (DM)

Date	Mean	Median	Std. Dev.	High	Low	Number of Ests.	Up	Down
1998 Est.								
Current	88.60	88.90	7.80	107.10	75.00	40	5	2
1997 Est.								
7/97	68.30	69.00	5.10	79.90	60.00	39	6	0
6/97	68.00	67.50	5.10	79.90	60.00	38	9	0
5/97	67.50	66.30	5.00	79.90	60.00	36	11	2
4/97	66.30	65.20	5.20	79.90	57.00	29	22	2
3/97	49.00	46.10	9.50	70.00	35.00	43	7	0
2/97	48.70	45.20	9.50	70.00	35.00	43	5	4
1/97	48.60	46.10	10.10	70.00	32.00	42	5	1

Source: I/B/E/S.