Allianz Global Investors

Tobacco: long-term pressures

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Executive Summary

Through the lens of Porter's Five Forces, the tobacco industry may appear to be an attractive prospect. It is a heavily consolidated industry which enables strong buying power for manufacturers who operate in a disciplined pricing manner. With limited substitutes and a highly addictive product, buyer power is very low. Well entrenched brands and strong loyalty have kept away the threat of any new entrants.

However, there is a strong factor putting pressure on most of these forces; the government. In the short term, the positive dynamics of the industry may well lead to strong performance of the companies during this period. Taking a longer term view, it seems inevitable that the negative pressures will put tremendous strain on the future prospects of the industry.

In this short piece, we explore a number of these pressure points and why tobacco companies may prove to be a poor investment for long-term investors. These pressures include:

- **Volumes:** Most indicators show the volume of tobacco sales in structural decline. This is not only a developed world phenomenon as some emerging markets are also experiencing negative volume trends.
- **Regulation:** Regulation continues to strengthen around the world with taxes used as the primary mechanism, but we also highlight increasing pressures on marketing, smoking restrictions and litigation costs.
- **Externalities:** Tobacco has an impact on society though the health and environmental implications of the product. The health implications are well researched and the contributions made through tobacco company taxes do not appear to outweigh the significant costs borne elsewhere in society such as the health care system. While environmental impacts are less well researched, there appears to be growing evidence on the negative costs to the environment from tobacco.

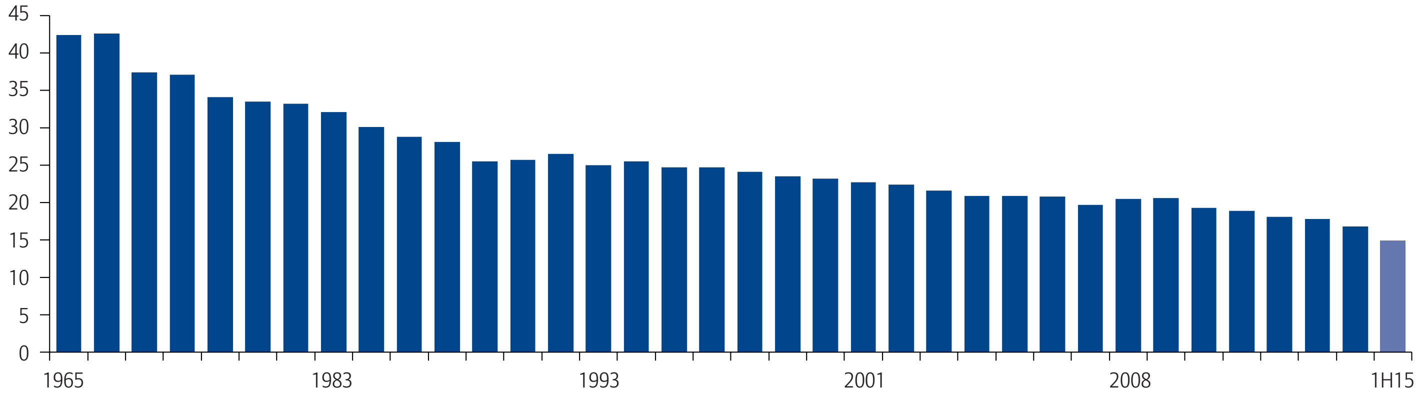
Volume declines

United States

Cigarette volumes peaked in the US in the 1980's and have experienced steady declines since. In 2015, cigarette volumes were more than half the peak 626.5 billion cigarettes sold in 1981. (Source: Company reports, BofA Merrill Lynch Global Research calculations.)

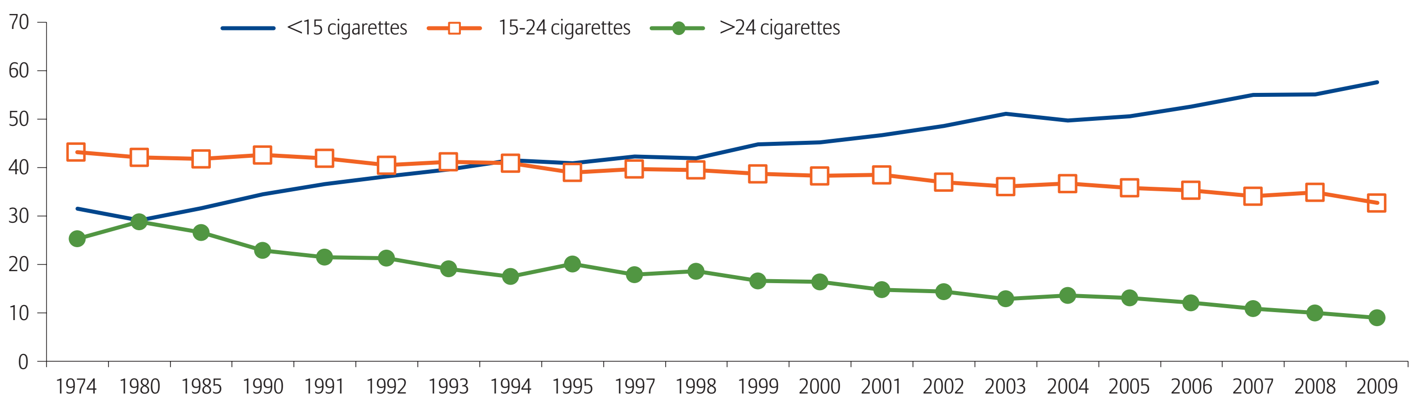
The market size for tobacco is contracting as the percentage of population smoking in the US declines rapidly. In 2015, according to the Center for Disease Control (CDC), less than 15% of the population were smoking. The smokers that remain are smoking less cigarettes per day. More than 60% of smokers smoke less than 15 cigarettes per day.

Historical smoking prevalence in the US (%)



Source: Center for Disease Control (CDC)

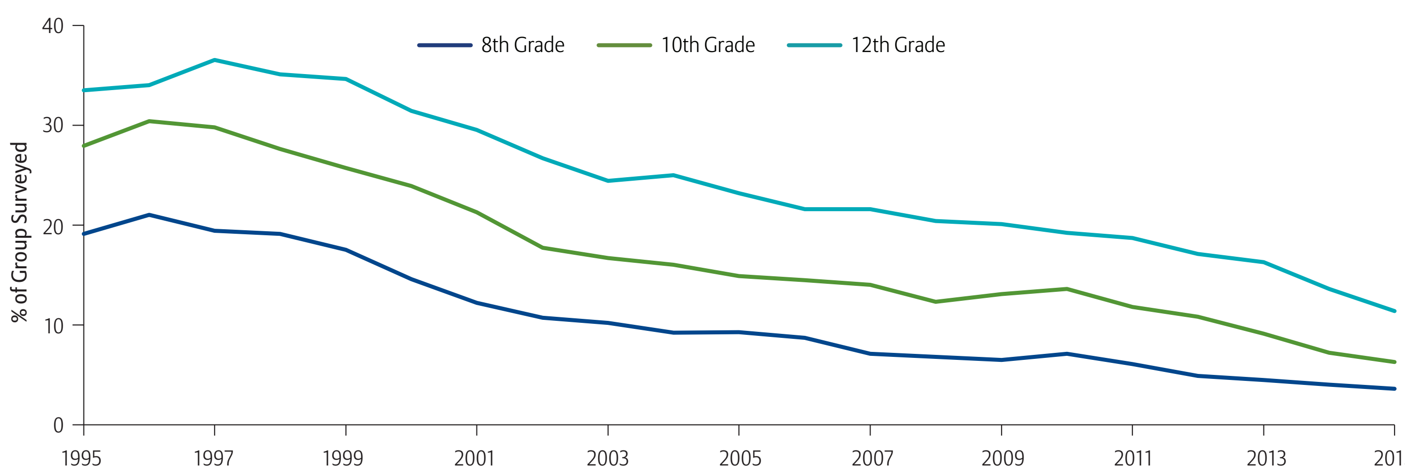
US smokers are smoking few cigarettes per day (%)



Source: American Lung Association, CDC.

The negative pressures on volumes do not show any signs of abating with the younger population less interested in smoking than generations before them. The 30-day cigarette use, % of sample that has smoked at least once in the last 30 days, among 8th, 10th and 12th graders in the US has dropped by more than 2/3rds.

30-day cigarette use trend



Source: Monitoring of the Future Study. As of December 2015.

International

Volume trends outside of the US show a similar picture with volumes in most countries around the world showing declines.

Geographies	2010	2011	2012	2013	2014	2015	5 year CAGR	3 year CAGR
World	-0.4%	0.4%	0.0%	-1.7%	-0.1%	-2.1%	-0.7%	-1.3%
World less China	-3.0%	-2.0%	-1.6%	-3.9%	-2.0%	-1.8%	-2.3%	-2.6%

Source: BofA Merrill Lynch Global Research.

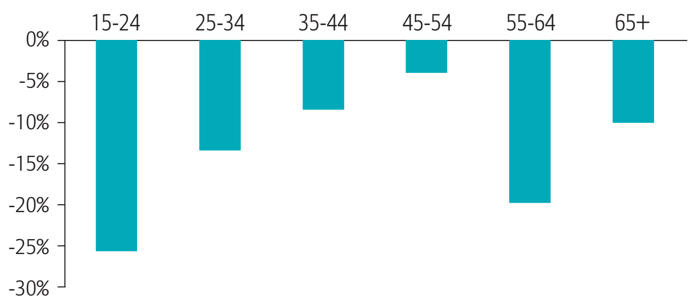
Philip Morris expects this trend to continue with projections for the medium term showing a decline of 1-2% in global ex-US cigarette volumes.

		Cigarettes Industry Volume Dynamics			
Market Groups	% of 2013 PMI Volume	% of 2013 Industry Volume	CAGR 2008–2012	Variance 2012–2013	2015+ Outlook
EU	22.0	16.0	(4.3)%	(7.5)%	(3)% – (5)%
Other OECD	19.0	16.0	(3.7)%	(2.6)%	(2)% – (4)%
Russia	10.0	11.0	(1.9)%	(7.6)%	(4)% – (6)%
Philippines	8.0	3.0	2.7%	(15.6)%	(1)% – (2)%
Other Non-OECD	41.0	54.0	0.2%	(0.1)%	Flat
Total	**100.0**	**100.0**	**(1.4)%**	**(3.0)%**	**(1)% – (2)%**

Source: PMI. As of June 2014.

Every country in Western Europe has shown 3 and 5 year CAGR declines to 2015 except for Turkey. But the youth in Turkey share the aversion to tobacco seen elsewhere in the world.

Turkey Statistics Institute, change in prevalence 08-12



Source: Turkey Statistics Institute, WHO. As of August 2012.

Even China, which now represents nearly 45% of global cigarette volumes, showed a fall in cigarettes smoked last year declining by 2.4%.

The tobacco industry has remained profitable and experienced top line growth in the face of declining volumes over time through the strong ability to increase prices, expand into new regions and consolidate the industry. As regional expansion and industry consolidation reaches full maturity, pricing becomes the only lever for these companies to maneuver. The inelasticity of tobacco can only be stretched so far and at some stage volume pressures will create headwinds on profitability and headline growth. With young populations around the world increasingly uninterested in tobacco, this may be sooner than expected.

Regulation

There is perhaps no other industry with as much regulatory pressures as tobacco. There are a number of regulatory pressure points which include; taxes, litigation, marketing and general restrictions on use. We briefly explore the industry impacts of each of these in the following section.

1. Marketing

General advertising bans of tobacco products gained traction in the 1990's with the US passing the Tobacco Master Settlement Agreement in 1997 and many countries following suit since. While the US led on advertising ban initiatives, Europe is taking a leading position in the next wave of marketing regulation through plain packaging. Plain packaging has the potential to be very material to tobacco companies as it removes some of the strong pricing ability held by these companies.

France and Ireland were among the first countries to pass legislation in 2015 that requires plain packaging from cigarette producers commencing in May of 2017. The UK followed shortly after, also mandating plain packaging from May 20th, 2017 onward. Several other countries such as Norway, Singapore, Turkey, South Africa, Canada and others are following suit.

There will not be a smooth adoption of plain packaging as legal action has been launched against the adoption of such laws. It is also unclear whether or not these measures are successful in combating the use of tobacco when implemented. However, plain packaging has serious potential of putting strain on the profitability of tobacco companies in regions implemented.

2. Litigation

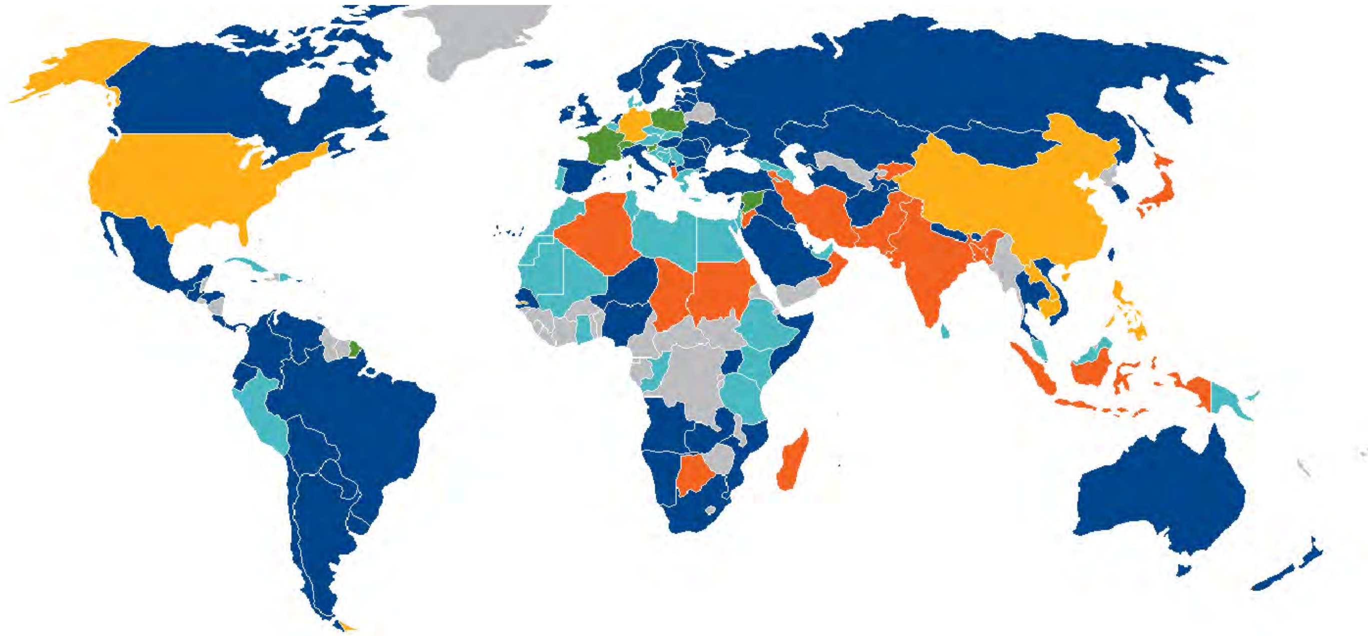
It is beyond the scope of this paper to explore the long list of litigation launched against the tobacco industry. While tobacco companies have historically been successful in overturning rulings against the industry, the litigation risk will likely persist as long as the industry operates.

The most recent and significant court ruling comes from Canada, where in 2015 a Quebec court ordered a number of tobacco companies to pay the equivalent of 12.5B US dollars to consumers of their product.

3. General smoking restrictions

Smoking bans impact nearly every country across the world with the scope of these bans ratcheting up over time.

Smoking bans by country



- No known "smoke-free" restrictions (or no data)
- Partial "smoke-free" restrictions, or patchy or inconsistent law enforcement
- No national "smoke-free" legislation—some localities have local restrictions
- National "smoke-free" legislation for public areas except entertainment and restaurants
- National "smoke-free" legislation for public areas except entertainment and restaurants—some localities have additional local restrictions
- National "smoke-free" legislation covering all public indoor areas (sometimes with specific exceptions)

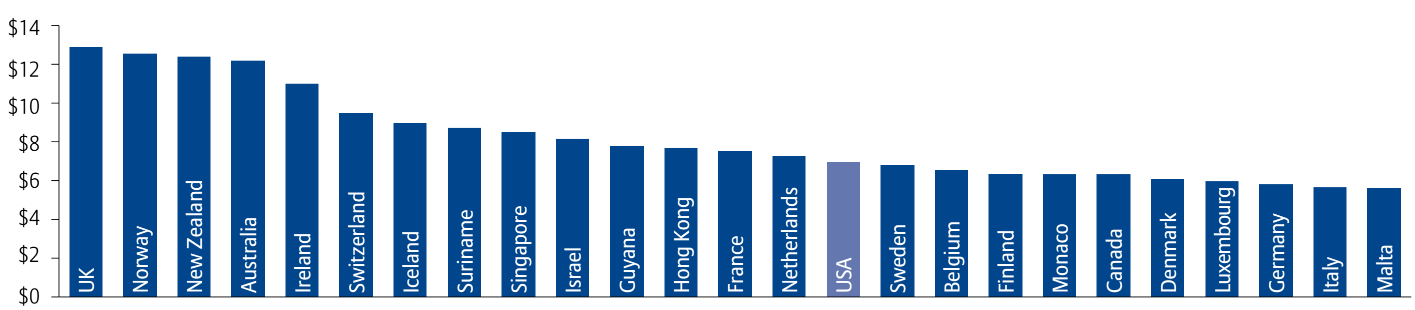
Source: Wikipedia. As of March 23, 2016.

4. Taxes

Taxation has been a popular tool of regulators to curb smoking as it generates government revenues while putting pressure on demand for tobacco. While taxation is rarely a positive in any industry, the oligopolistic and inelastic nature of the tobacco industry enables tax increases to act as a mechanism for ensuring price discipline among the large players and price increases above the mandated tax increases. However, as noted above, there are limits to the ability of tobacco companies to push through price increases without significantly impacting demand.

As one would expect, the chart below shows high taxation regions experience the highest price per pack of cigarettes.

Top 25 countries with the highest per pack price (20 cigarettes)



Source: Euromonitor. As of 2015.

Negative externalities—societal impacts

The regulatory pressures, litigation risk and volume declines are largely actions that have been encouraged due to the negative societal impacts of tobacco. The primary negative externality is the health implications of using the product and the related costs across society. Another aspect, though far less researched than the health issues, is the negative impact on the environment.

Health

The health implications of tobacco use have been researched extensively leading to a long list of data points on the negative effects. Below is a sample of statistics taken from the CDC (as of 2014):

- Cigarette smoking is responsible for more than 480,000 deaths per year in the US
- Smoking is the leading cause of preventable death in the US
- More than 16 million Americans are living with disease caused by smoking
- The total economic cost of smoking is more than $300 billion a year with $170 billion in direct medical care and $150 billion in lost productivity—this compares to only $25.8 billion collected by states from tobacco taxes and legal settlements
- Worldwide, tobacco use causes nearly 6 million deaths per year, and current trends show that tobacco use will cause more than 8 million deaths annually by 2030

Environment

While much less researched than the health effects, the environmental impact of tobacco manufacturers is increasingly being investigated. This may lead to increased regulation and higher litigation risk. At the moment environmental research is sparse and fragmented, but a few findings include:

- A report from International Coastal Cleanup suggested that cigarettes accounted for 28% of total marine debris items (Source: International Coastal Cleanup –2015)
- The City of San Francisco spends an estimated $11 million per year on cigarette butt clean-up (Source: San Francico –2009)
- While the net CO_2 emissions may be negligible as the smoking of tobacco is offset by the carbon sink through growing the plants, toxic chemicals from littered butts can pollute the soil and water where discarded

These negative externalities may not have a direct impact on the investment potential of tobacco companies, but they do feed directly into the mechanisms that put negative pressures on the industry.

Market expectations

Is the market factoring in these pressures? Looking at the consensus expectations for the next four years provides some insight on whether or not these pressures are being discounted currently.

Sales

The average consensus sales growth forecast for five of the largest global tobacco companies is shown in the table below. Consensus estimates show moderate growth over the next couple of years and negative revenues in 2019. Expectations do appear to incorporate some of the volume pressures noted throughout this paper.

	2016	2017	2018	2019
Sales Growth	11.22%	4.70%	3.66%	0.27%

Source: Bloomberg street estimates.

Earnings

The average consensus earnings growth forecast for the same tobacco companies is shown in the following table. The expectations show mid-single digit earnings growth is expected for the foreseeable future. This suggests that consensus is not expecting the industry pressures to meaningfully hurt pricing ability and instead factors in continued pricing rises.

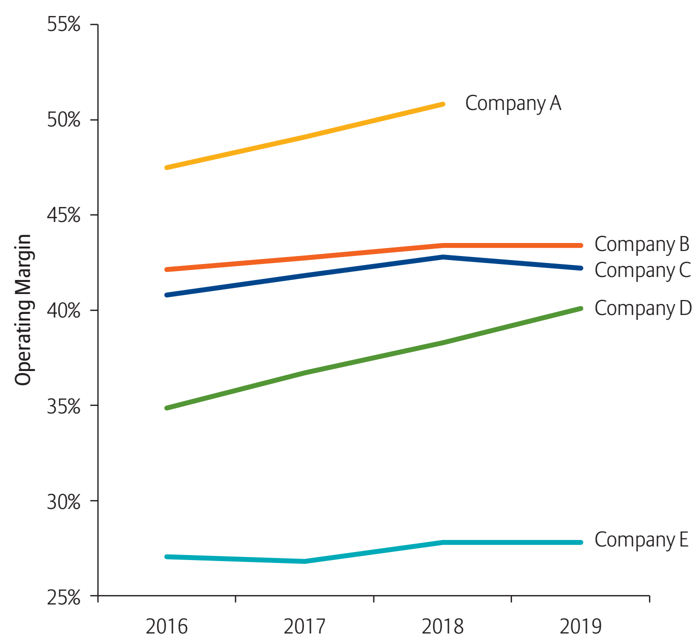
	2016	2017	2018	2019
Earnings Growth	12.70%	8.60%	7.70%	6.90%

Source: Bloomberg street estimates.

Operating Margin

Expectations for the operating margins of the five largest public companies shows a similar message, with consensus forecasting all tobacco companies to show margin expansion over the coming years.

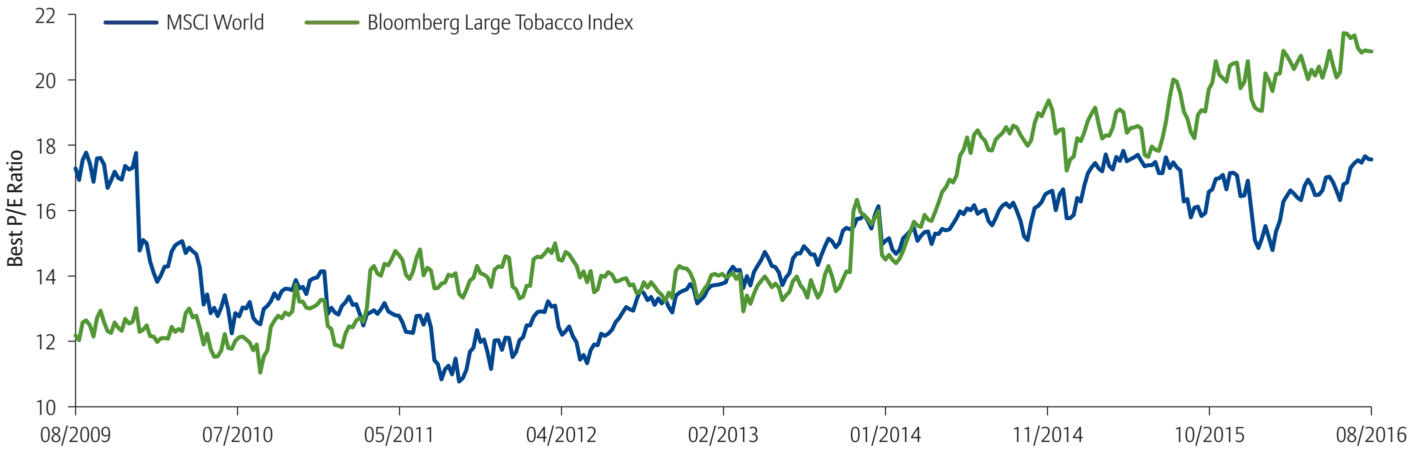
Forecast Operating Margin



Source: Bloomberg street estimates.

Value of Earnings

Finally, we show what the market is paying for large tobacco company earnings. The chart below shows the multiple being paid for large global tobacco earnings (green line) is well above the P/E observed for the MSCI World (blue line). While the P/E divergence is the most significant observed in recent history, the same is true for the wider consumer staples space as the perceived relative defensiveness of these earnings is attractive in the current market environment.



Source: MSCI World, Bloomberg Large Tobacco Index.

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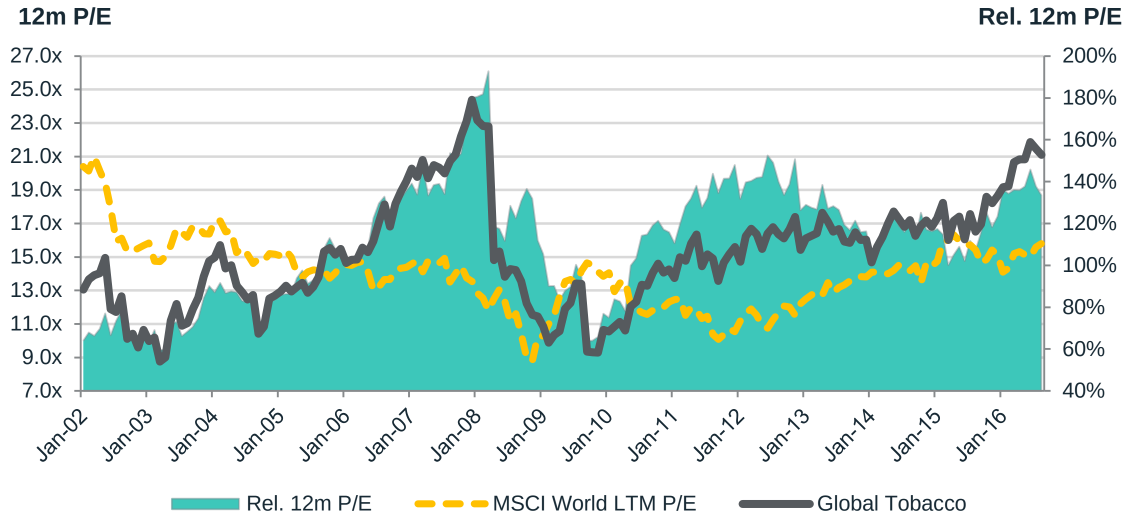
Tobacco—why *not* invest today?

Key concerns one should have with respect to investing in the tobacco industry today:

Valuation

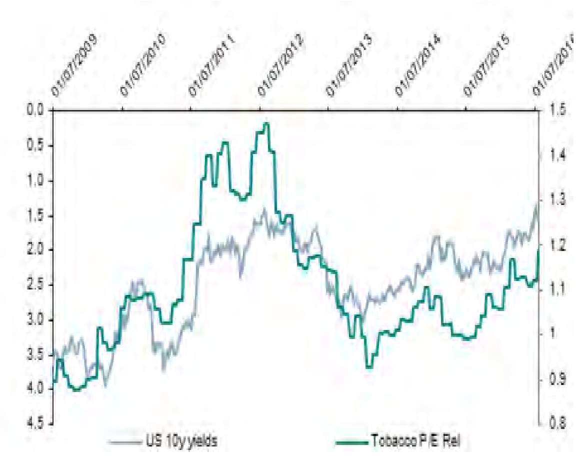
The tobacco industry has been a strong performer, and is currently trading at all-time highs on forward P/E multiples (19.7x). Additionally, the premium relative to the market has rarely been higher (currently 20%).



Source: FactSet, Bloomberg

Industry Rotation

In the current low growth and low interest rate environment, the tobacco industry has benefitted from the rotation to defensive, cash flow-generating, high-dividend-yielding areas of the market. Once interest rates start to increase, the characteristics of the tobacco industry will become less attractive as investors move out of the industry in search for higher growth prospects.



Source: Datastream

Declining volume trend may not last

In addition to sector rotation, one of the key reasons for the strong share price performance of the tobacco industry has been the slowing rate of volume declines since 2013. The main drivers of the improving trend include:

- In the U.S., slowdown in e-cigarettes and moist smokeless tobacco (MST) growth.
- In Europe, slowing growth in e-cigarettes and roll-your-own products (RYO), as well as better controls on illicit cross border trade.
- The slightly improved macroeconomic environment, lower unemployment rates, and lower gas prices have also helped.

However, recently reported tobacco results have indicated that we may be starting to see this moderation in the rate of volume decline reverse (tobacco companies expect the U.S. market volumes to return to the long-term trend decline of 2-4%) as the recent drivers of the volume moderation diminish.

The rate of volume decline may accelerate in emerging market countries as the consumer is under increasing spending pressure and governments look to repair their income streams by increasing duties on goods, including tobacco (e.g. Brazil, Argentina, Russia, Turkey).

Regulation/tax continues to be a challenge

Outside the U.S., tobacco regulation is looking increasingly challenging and provides uncertainty with respect to future earnings visibility. Recent regulation potentially impacting the industry includes:

Plain Packaging (PP) – PP has only been implemented in Australia to date, although a number of countries are looking to also implement PP (United Kingdom, France, Ireland, Norway), and we should expect this trend for countries outside the U.S. to continue. Although it has been difficult to gauge the true impact of Plain Packaging since its implementation in Australia (as tobacco tax has also been increased significantly at the same time), it does appear to have led consumers to down-trade (to lower priced products), thus it appears PP weakens the pricing power of the industry and likely ultimately leads to the dilution of premium brands (magnitude at this stage still unclear). The potential larger concern for the tobacco industry is that, over time, it is very possible PP destroys branding, which will likely have an impact on the recruitment of new smokers in the future.

PP may also accelerate the trend of illicit trade of tobacco products, which has recently been moderating (currently accounts for around 11% of global consumption). Illicit trade is clearly a challenge for the industry, impacting volumes and pricing.

Regulation/tax continues to be a challenge (continued)

Tobacco Products Directive – (TPD, adopted in April 2014 by the European Union) regulates the manufacture, presentation and sale of tobacco products in the European Union: key new requirements of TPD include larger health warnings on tobacco packaging, minimum pack sizes, and the banning of menthol cigarettes from 2020. These new rules are expected to cause some short term disruption (e.g. in recent years the industry has benefited from smaller pack sizes), however, most believe that, over time, these will have a minimal impact on consumption – the risk is that these new regulations accelerate the rate of volume decline.

Very recently it has been reported that the French Government is considering a decree to ban brands with suggestive brand names, including Vogue, Lucky Strike, Marlboro Gold, Fortuna, News, Gauloises. The ban is based on the logical conclusion of the European Tobacco directive which stipulates tobacco products “must not include any element that contributes to the promotion of tobacco or give an erroneous impression of certain characteristics”. For more information, see: https://www.theguardian.com/world/2016/jul/20/french-smokers-fume-france-plans-ban-gitanes-gauloises-cigarettes

The constant threat for the industry is disruptive tax increases. Although in most markets tax policy is benign, in recent times we have seen sharp tax increases in Malaysia (+40% in Nov ‘15 with volumes down 25%), Australia (+12.5% above inflation for the past four years with volumes down around 5%), and Argentina, highlighting that one cannot be complacent in terms of future tobacco tax policies.

Outside the U.S., litigation is a risk that is not priced in

The market knows and understands U.S. tobacco litigation, and the risks. However, the market is extremely complacent on tobacco litigation risks outside the U.S. A significant case currently is in Canada (C$15.6bn of damages was awarded against three tobacco companies in June 2015, which is now going through the appeal process lasting at least 2-3 years, or longer). In addition, in the Provincial Healthcare Recovery cases in Canada, each province is suing the tobacco industry for tens of billions of healthcare costs, where there is a risk the industry could loose and lead to large awards against it. A litigation win in Canada against the industry, could lead to other countries (outside the U.S.) to follow suit.

Next generation products could have a negative impact on margins

Next generation products (NGP, generally described as ‘reduced harm’ products that delivers nicotine in place of regular cigarettes) is the new growth area for the tobacco industry. While this is a potential growth opportunity for the future for the industry, these new products require significant investment (in R&D and marketing) that will impact the industry margins, and impact the strong cashflow generation. A concern for the industry is that NGP cause consumers to switch from traditional combustible cigarettes, which at least in the short term (or longer) would lead to negative margin mix (and cashflow generation) as the industry invests more behind these products given the increased competition. In addition, the industry regulators (and income departments) have yet to fully regulate (still evolving) or tax these products – the outcome of future regulation and taxation could impact the future attractiveness of the NGP.

Industry Report Brief: Tobacco

December 2015

INDUSTRY TRENDS

- Tobacco companies have recognized the burgeoning market opportunity presented by e-cigarettes and are investing heavily in e-cigarette brands. All major tobacco companies have positioned themselves to capture escalating e-cigarette demands and are developing or already have e-cigarettes on the market. Although e-cigarettes are likely here to stay and may bring about short-to medium profits that will help offset declined sales of cigarettes in developed countries, companies are not immune to regulatory risks.
- Companies are highly exposed to regulatory risks associated with chemical additives facing reformulation risks should specific chemicals and flavorings be banned (e.g., menthol is to be phased out beginning in 2020 in the EU). Most companies appear unprepared to address reformulation risks in anticipation of potential additives bans. We expect regulatory pressures aimed at phasing out chemical additives in tobacco products to increase in the medium term.
- As tobacco marketing regulations continue to tighten e.g. via plain packaging laws (Australia, Ireland), companies are less able to differentiate their products - significantly eroding brand value and increasingly challenging for companies to capture new market segments.
- The UK Modern Slavery Act (newly passed in 2015) places increased regulatory emphasis on company disclosure with regard to identifying and addressing poor labor practices in supply chains (slavery, human trafficking). Most companies have low disclosure with regard to instances of non- adherence with labor standard practices in supply chains. These companies face potential legal action and negative publicity.

	2014	2015		
Japan Tobacco	B	BB	↑	Japan Tobacco has made some slight improvements in its labor practice programs. In 2014 its agricultural labor practices applied to 7% of the company's directly contracted farmers, and the company reports that its labor practices will begin to cover third party leaf suppliers in 2016.
Imperial Tobacco	BB	BBB	↑	Along with specific water consumption reduction targets, Imperial Tobacco is among the few companies in the peer set to have taken steps to identify water risks along its supply chain.
KT&G	A	BB	↓↓	A former VP of KT&G is being investigated (as of November 2015), while a current executive has already been arrested in October 2015, by regulators over allegations of receiving kickbacks from contractors, both amounting to USD 1.1 million.

RATINGS HIGHLIGHTS

Swedish Match	A	Maintain
Imperial Tobacco	BBB	Up
British American Tobacco	BBB	Maintain
Japan Tobacco	BB	Up
Philip Morris	B	Up

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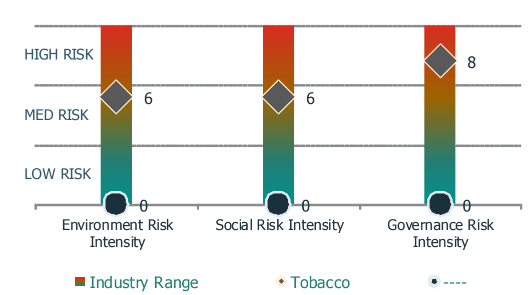


Global focus on e-cigarette and plain packaging regulations amidst ongoing regulatory pressure in all regions toward tobacco smoking driven by WHO FCTC

- **Electronic cigarettes (e-cigarettes) are booming but regulatory landscape increasingly restricted**

Regulators are increasingly becoming more aggressive in restricting tobacco ingredients and promotional activities. At the same time **more companies are shifting their focus from traditional combustion cigarettes to include e-cigarettes to respond to rapid shifts in consumer demand**. E-cigarettes are electrical devices that simulate cigarette smoking by inhaling nicotine-infused vapor produced by heating, rather than the burning, of nicotine. The extent of negative health impacts of e-cigarettes are as of yet unknown. The global market for e-cigarettes was roughly USD 7 billion in 2014, with an estimated USD 2.5 billion in the US.

Tobacco companies have recognized the burgeoning market opportunity presented by e-cigarettes and are investing heavily in e-cigarette brands. All major tobacco companies have positioned themselves to capture escalating e-cig consumer demands and are developing or already have e-cigarettes on the market: **Altria (Mark Ten)**, **Imperial Tobacco (Puritane)**, **British American Tobacco (Vype)**, **Japan Tobacco (E-Lites)**, and **Philip Morris (Nicolite)**.

The growth trajectory of e-cigarettes will depend on the level of regulatory oversight of this sub-segment of the tobacco industry. Although tobacco companies are currently enjoying fairly lax regulatory oversight, **stricter regulations appear to be imminent.** While e-cigs are likely here to stay and may bring about short-to medium profits that will help offset declined sales of cigarettes in developed countries, **companies are not immune to regulatory risks**. In the EU, e-cigarettes will also be regulated; by May 2016, all 28 European Union Member States will regulate e-cigarettes as part of the EU Tobacco Products Directive (see figure 4 for more information on regulations worldwide). New York City banned e-cigarettes in many public places (restaurants, bars), which took effect in April 2014. Australia considers liquid nicotine a poison by law, where the retail sale of liquid nicotine is only allowed via permit. In the UAE, the Ministry of Health has banned e-cigarette, citing health concerns. Singapore has outlawed the importation, distribution, and sale of e-cigarettes. Surprisingly, while China manufactures 95% of e-cigarettes, e-cigarette use in the country is very small. According to the World Health Organization (WHO), of the approximately 1 billion smokers globally, 80% live in low- and middle income markets, the majority of which have not yet been penetrated by e-cigarettes.

FIGURE 1 **Adult Smoking Prevalence (%), 2007-2013**

Source: MSCI ESG Research, WHO Report on Global Tobacco Epidemic 2015

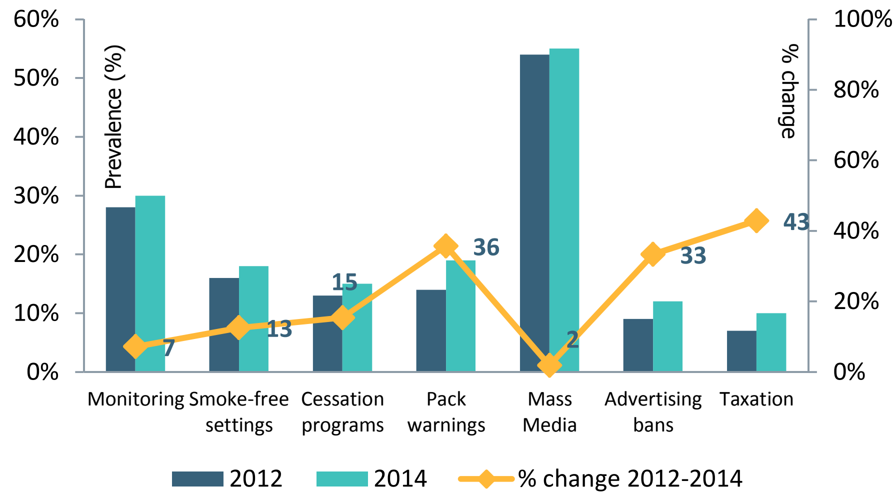
- **WHO Framework Convention on Tobacco Control (FCTC): Driver for More Stringent Tobacco Regulation Worldwide (see Product Safety & Quality – Responsible Marketing on page 7)**

Tobacco companies will face increased tobacco control policies in both developed and developing countries as national health budgets are burdened by the substantial health, social, and economic costs associated with cigarette smoking. Measures to reduce tobacco consumption include warning labels on cigarette packages to convey health risks, increased taxes to drive lower consumption, smoke-free environment laws, and curtailing the marketing of tobacco products via advertising bans (see figure 2).

Specifically related to e-cigarettes, marketing concerns are focused around marketing to youth (e.g., via attractive flavors and celebrity endorsements), 'welcoming back' ex-smokers, and unsubstantiated claims – i.e., users supposedly experiencing weight loss, increased energy, and improved sleep. As of January 2014, over 7,700 e-cigarette flavors were available, with roughly 200 new flavors introduced on a monthly basis. The fast-growing sub-segment is quickly gaining traction among consumers who are trying to quit or reduce health risks, thanks to the positioning of e-cigarettes as being less harmful. The wide range of "fruity" flavors further plays upon such perceptions, and according to some critics, lures young consumers into trying alternative smokeless tobacco options with 'cherry crush', 'strawberry champagne', or 'bombshell' flavorings.

We expect increased anti-tobacco regulation and tobacco control measures to negatively impact conventional tobacco sales volumes going forward. According to the WHO, over 2.3 billion people, or over a third of the global population, are covered by at least one of six types of tobacco control measures.

FIGURE 2 **Increase in Global Population Covered by Tobacco Control Policies, 2012-2014**

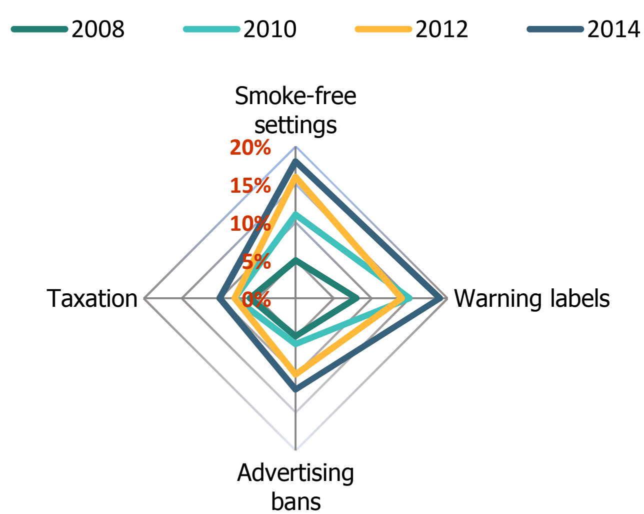


Source: MSCI ESG Research, WHO Report on Global Tobacco Epidemic 2015

While developing markets remain the strongest growth markets for the tobacco industry, we see even these traditionally unregulated markets following in the footsteps of the EU and US in establishing taxes, labeling requirements, and/or smoke-free environments. According to the World Health Organization, over the past five years, **most progress in tobacco regulation has occurred in low-and middle income countries.** In fact, worldwide, excluding China, the overall global volume of tobacco products is declining taking into consideration increases in absolute volume driven by population growth.

Increased regulation of conventional tobacco products in low-and middle-income countries could jeopardize companies' long-term growth prospects in these markets, on top of already stagnant or declining sales in high income countries. Faced with declining sales in developed countries, underscored by heavy taxes (particularly in the EU) and increasing product regulation, many tobacco companies have expanded into developing regions (e.g. countries in Asia) to capture new market share and boost sales.

FIGURE 3 **Proportion of Global Population Covered by Tobacco Control Policies, 2008-2014**



Source: MSCI ESG Research, WHO Report on the Global Tobacco Epidemic, 2015, 2013 and 201

- **Plain Packaging: Ireland and UK ban branded cigarette packaging, following in the footsteps of Australia**

Following Australia's lead to require that cigarettes be sold in plain, homogenous packages, (i.e. banning company trademarks, colors, and imagery on cigarette packaging), in May 2013 Ireland's Department of Health announced government approval to initiate plans to similarly launch plain packaging. Plain packaging requires that brand and promotional aspects on cigarette packages be removed, inhibiting companies' abilities to differentiate their products. Should more countries follow the lead of Australia and introduce standardized packaging, **companies will have fewer opportunities to capture market segments via brand appeal and effectively promote their products, restricting their ability to capture new populations**.

FIGURE 4 **Tobacco industry regulation landscape – select countries**

*Source: News reports and analyses, company disclosure, World Health Organization, Tobacco Control Journal. *N.B. Not an exhaustive list of tobacco control regulations.*

Theme	Country/ Region	Month/ Year	Regulatory Development Snapshot
E-cigarettes*	US	April, 2014	The US Food and Drug Administration announced rules restricting e-cigarettes, including banning sales of e-cigs to children and requiring tobacco firms to disclose ingredient lists. The announcement did not ban flavoring or advertising. - Chicago, Illinois forbids "vaping" in restaurants, shops - NYC forbids vaping in NYC parks
	EU	February, 2014	The EU approved a revised EU Tobacco Products Directive, strengthening how tobacco products are manufactured and presented (including nicotine-containing e-cigarettes). The regulation of flavors, advertising, and age restrictions related to e-cigarettes is left to individual Member States. The new rules exclude medicinal e-cigarettes and e-cigarettes that do not contain nicotine.
	India	September, 2013	India: e-cigarettes banned in Punjab - Punjab becomes first state in India to illegalize e-cigarettes. - E-cigarettes are currently not regulated by any national authority in India. India is the sixth largest tobacco market globally (by cigarette volume), dominated by smokeless tobacco sales (75%).
Plain packaging*	UK	March, 2015	UK parliament voted to ban branding on cigarette packs; to be implemented May 2016
	Ireland	March, 2015	Ireland will become the first country in the EU to pass a plain packaging law (and second country globally after Australia) to ban branded cigarette packages
	Australia	December, 2012	Australia becomes first country to introduce plain packaging of cigarettes. - In July 2014 Australia reported that nation's smoking rate dropped by over 15% - from 15.1% (2010) to 12.8% (2013) driven by its plain packaging law. Australian health officials report that smokers find that cigarettes taste worse post introduction of plain packaging, despite no ingredient change. Possible future bans in UK, New Zealand, Ireland.
Menthol flavoring	Germany	March, 2013	Germany bans menthol capsules, citing Articles 9 and 10 of FCTC (regulating content of tobacco products and tobacco-related disclosure); EU to phase out menthol in cigarettes beginning in 2020
	US	December, 2013	Chicago, Illinois bans the sale of menthol cigarettes within 500 feet of Chicago schools; as of February, 2014, the city of Berkeley, California took similar steps to also ban flavored menthol cigarettes near schools
Other tobacco regulatory developments*	China	2013	China's cabinet, the State Council, banned officials from smoking in hospitals, schools, and public transport areas. - China is the world's largest cigarette market; retail cigarette market in 2013 was USD 205 billion. - Regulation will have minimal impact on multinational tobacco companies, due to a near-monopoly on tobacco sales in China by China National Tobacco Corporation.
	Russia	June, 2013	Russia, the second largest cigarette market by consumption volume globally (behind China) and with a retail cigarette market of USD 27 billion passed an anti-tobacco law that took effect in June 2013. The law seeks to lower smoking-related fatalities by 50% over the next decade by banning smoking in public places and placing restrictions on the sale and marketing of cigarettes. - Russia banned smoking in medical facilities, sports and cultural venues, other public areas (including hotels, cafes, bars, shopping centers) - Cigarette consumption fell by 12% (16 billion cigarettes) between the first quarter of 2013 and the first quarter of 2014. *- Japan Tobacco is the market leader in Russia, with over 35% market share. PMI, BAT, and Imperial Tobacco also have a presence. Philip Morris reported a 9% decline in sales in Russia during Q1, 2014.*
	Japan	July, 2013	Japan's Health Ministry sets new tobacco control targets.
	Hungary	July, 2013	Hungary limits distribution of tobacco products nationally to government licensed and designated retailers ('National Tobacco Shops'). Aim is to reduce youth smoking.
	Philippines	January, 2013	In January 2013, the Philippines government (the seventh largest country by tobacco volume consumption globally) passed a 'sin tax', or an increase in indirect taxes on cigarettes.

Companies' Performance on the Key Issues

Description: Key issue scores constitute 100% of the total companies' ranking. The table below indicates key issue weights and rankings for the Tobacco industry.

TOBACCO

Company	Environment	Environment	Social	Social	Social	Governance	Company Specific	ESG Rating and Trend	
	Water Stress	Biodiversity & Land Use	Supply Chain Labor Standards	Product Safety & Quality	Chemical Safety	Corp. Governance			
	14%	18%	18%	21%	14%	15%			
BRITISH AMERICAN TOBACCO (MALAYSIA) BERHAD	●●●	●●●●	●●●●	●●●●	●●●	●●●●		AA	↔
Swedish Match AB	●●	●	●●●●	●●●●	●●	●●●●		A	↔
ITC LIMITED	●	●●●●	●●●●	●	●●●●	●●●		A	↑
IMPERIAL TOBACCO GROUP PLC	●●●●	●●●	●	●●●●	●●●	●●●●		BBB	↑
BRITISH AMERICAN TOBACCO P.L.C.	●●●●	●●●●	●●	●●●	●●	●●●	*BEF	BBB	↔
UNIVERSAL CORPORATION	●	●●●●	●●	●●	●●●●	●●●		BBB	↔
Altria Group, Inc.	●●●	●●	●●●	●●	●	●●●		BBB	↑
KT&G Corporation	●	●●	●●●	●●●	●●●●	●●	*BEF	BB	↓↓
REYNOLDS AMERICAN INC.	●●●	●●●	●●●	●●●	●	●		BB	↔
JAPAN TOBACCO INC.	●●	●●●	●●	●●	●●●●	●		BB	↑
VECTOR GROUP LTD.	●	●●●	●●	●●●●	●	●		BB	↑
Philip Morris International Inc.	●●●●	●	●	●	●	●		B	↑
PT Gudang Garam Tbk	●	●	●	●	●●●	●		CCC	↔

QUARTILE KEY: ● Bottom Quartile; ●● Third Quartile; ●●● Second Quartile; ●●●● Top Quartile
RATING TREND KEY: ↔ maintain ↑ upgrade ↑↑ two or more notch upgrade ↓ downgrade ↓↓ two or more notch downgrade
* Ratings, quartiles and company scores were correct at the date of publication of this report and may since have changed due to event-driven reviews. In cases of discrepancies between the company report and industry report, the company report should be considered definitive.

Product safety & quality – responsible marketing

Industry's Contribution to Externality	**HIGH IMPACT** Tobacco advertising has been associated with an increase in tobacco product consumption, where aggressive marketing and unsubstantiated claims can not only encourage existing smokers to smoke more, but also decrease smokers' motivation to quit and encourage youth to start smoking (see Calls for the Period section, p. 2-3). Tobacco companies have been forced to adapt their marketing approaches to meet regulatory restrictions such as plain packaging particularly in developed countries (e.g., Australia).
Time Horizon of Risk / Opportunities Resulting from Externality	**SHORT TERM RISK (*<2 years*)** Tobacco companies are increasingly facing partial or total bans on advertising, marketing, and promotion of tobacco products not only in developed countries but also in emerging markets, especially focused on responsible marketing that prohibits the targeting of youth. Australia became the first country to introduce plain cigarette packaging in December 2012, followed by Ireland. As such, tobacco companies will have fewer opportunities to differentiate their products from those of competitors if more countries follow the lead of Australia and Ireland. To date, several other countries such as Ireland, New Zealand, the UK, and India - the second largest consumer of tobacco products worldwide – have indicated interest or are in the process of implementing similar measures in an effort to curtail cigarette smoking.
Main Risks / Opportunities	market share loss; lawsuits; brand damage

KEY TAKEAWAYS

- **Nearly 60% of companies face controversies related to their marketing practices, or are facing consumer and government lawsuits seeking compensation for health problems and healthcare costs associated with cigarette smoking (e.g., Japan Tobacco, BAT, Philip Morris, and Altria).**
- **Most companies (65%) have marketing policies that address marketing of tobacco products and specifically prohibit marketing to youth, yet surprisingly, only 50% of companies state that they have audit mechanisms to help ensure compliance with marketing codes and identify potential breaches**
- **PMI has faced major product liability lawsuits in Canada, Argentina, Brazil, Columbia, Venezuela, Israel, and Nigeria; Japan Tobacco is facing lawsuits in Canada.**

We assess companies' marketing policies to respond to regulators' increased concerns around the consumption and branding of tobacco-related products, as exemplified by more plain packaging laws over the last several years (Australia, Ireland), regulatory concerns regarding the appeal of e-cigarettes to children, and the continued emphasis on marketing (along with other policies such as taxation) via the WHO FCTC. **Should companies be found to improperly market their tobacco products, they could face fines, penalties and legal costs from consumers and regulatory agencies** (e.g., claims that products were misbranded, companies making unsubstantiated claims, or downplaying of health risks associated with tobacco consumption). Without marketing restrictions, going forward technological advances could include cigarette packages that include varnishes with certain tactile experiences, pre-recorded messages, and various inks, ranging from phosphorescent to photochromic (light-sensitive) to thermochromic (heat-sensitive).

Most companies (65%) have marketing policies that address marketing of tobacco products and specifically prohibit marketing to youth; however, **ITC Ltd.** and **Alliance One** are among the few companies in the set that appear to lack such policies. Further, 57% of companies report training programs for employees to reduce underage tobacco access and use, yet surprisingly, only one-half of companies state that they have audit mechanisms to help ensure compliance with marketing codes and identify potential breaches (Altria, British American Tobacco, Imperial Tobacco, Japan Tobacco, and Swedish Match). At the same time, most of these same companies also face controversies regarding the safety or marketing of their products.

Third party evidence suggests that companies in this industry generally do not appear to uphold their marketing policies particularly in developing market countries where oversight of marketing approaches and where regulatory enforcement mechanisms are typically less robust compared to developed economies. Violations include insufficient age verification procedures during promotional events and non-adherence regarding the size and position of health warnings on promotional items (e.g., using tactics such as delaying the delivery of cigarette packs such as by overstocking cigarette packs that are not yet in line with pictorial warnings). **Nearly 60% of companies face controversies related to their marketing practices, or are facing consumer and government lawsuits seeking compensation for health problems and healthcare costs associated with cigarette smoking.** This includes **Japan Tobacco**, **BAT, Philip Morris,** and **Altria**. For example, **BAT** has received criticism for targeting youth in its marketing practices, and **Philip Morris** for targeting upwardly mobile women to expand its market base. This suggests that companies' compliance mechanisms may be inadequate. As marketing restrictions tighten in developing countries and more low-and middle-income countries passed anti-tobacco control laws driven by the WHO FCTC, companies may be held more accountable.

In particular, **BAT** and **Philip Morris** have been accused of downplaying risks associated with smoking. They have faced repeated lawsuits filed by consumers particularly concerning the misleading marketing of cigarettes as "light", "mild" or "low tar". Such claims, it is argued, can result in consumers viewing certain types of cigarettes as 'safer' alternatives than others. This indicates that, on a broader level, companies may view the financial gains from violations of marketing compliance policies as outweighing the financial losses of fines incurred.

In general, companies have been successful in avoiding major fines that would threaten their cost structure. Yet, we believe they will continuously face litigation related costs to defend the various lawsuits in which they are involved. **PMI** has faced major product liability lawsuits in Canada, Argentina, Brazil, Columbia, Venezuela, Israel, and Nigeria; **Japan Tobacco** is facing lawsuits in Canada. We note that in September 2015 Japan Tobacco reached an agreement with Reynolds American, which gives Japan Tobacco rights to market the Natural American Spirit brand outside of the US.

BEST PRACTICES Imperial Tobacco	**Imperial Tobacco's** marketing code addresses the content of marketing, the style, health warnings, and sponsorship of tobacco-related products. Notably, it is among only a few companies in the peer set that reports that it has established auditing mechanisms to oversee compliance with its marketing code, including a central monitoring system whereby it collects data on a monthly basis related to allegations of breaches.
BIGGEST CONCERNS Philip Morris	**Philip Morris** has faced repeated controversies regarding its marketing practices, which could indicate structural issues at the management level. This includes allegations that the company's marketing of "light" brands is misleading (i.e., misinterpreted as a safer cigarette). Such controversies can not only compromise customers' health, but also raise questions regarding the company's commitment to uphold its marketing standards and result in fines or other legal costs.

FIGURE 5 **Company Performance on Product Safety & Quality – responsible marketing**

Description: Description: Risk exposure is evaluated based on a company's 2014 sales (as a proxy for volume of production). Risk management along the y-axis assesses companies' marketing policies (including the prohibition of marketing to youth), employee training on marketing policies, audit programs to ensure compliance, and level of transparency regarding instances of non-compliance.

Supply chain labor standards

Industry's Contribution to Externality	**HIGH IMPACT** Like in other agricultural industries, poor labor practices are prevalent along tobacco companies' supply chains, primarily at tobacco leaf farms in developing countries where regulations on labor standards are often poor or non-existent but also in developed countries such as the US. Due to the disease-prone nature of tobacco leaves, tobacco leaf farmers are required to use large amounts of fertilizer, pesticides, and herbicides, which can have detrimental effects on human health (e.g., pesticides cause neurological damage and nicotine can result in green tobacco sickness (GTS)). Workers are often exposed to significant amounts of hazardous chemicals and often lack protective equipment and proper training on pesticide use. Tobacco growers, particularly children, are especially vulnerable to GTS, caused by the absorption of nicotine into the skin due to the handling of wet tobacco leaves.
Time Horizon of Risk / Opportunities Resulting from Externality	**MEDIUM TERM RISK (*2-5 years*)** Tobacco companies rely heavily on tobacco leaf farmers (approximately 33 million workers in farms globally vs. 1.2 million in tobacco manufacturing). Along with poor labor practices such as health and safety risks, in total, it is estimated that the agricultural sector employs almost 70% of all child labor worldwide (representing approximately 132 million children between ages 5 and 14). Companies are under constant pressure internally (as well as externally by labor watchdogs and higher regulatory scrutiny – via the UK Modern Slavery Act (passed in 2015) and the California Transparency in Supply Chains Act) to be held accountable for ensuring fair labor practices are upheld along their supply chain. Companies with poor supply chain labor management practices could face workflow disruptions and risk brand damage.
Main Risks / Opportunities	risks of production disruption; reputational/brand damage

KEY TAKEAWAYS

- **Transparency related to labor standard practices and instances of non-compliance at tobacco leaf farms remains low among the industry. However, increased regulatory emphasis (via the newly passed UK Modern Slavery Act in 2015) will require eligible companies to increase their level of disclosure with regard to efforts (if any) geared toward identifying and addressing poor labor practices along their supply chains. Altria, ITC Ltd, and Reynolds American have the highest level of disclosure related to violations of labor standards along their supply chains.**
- **Only 20% of companies including Reynolds American, ITC Ltd., and Philip Morris Reynolds American have established programs to audit suppliers' compliance with codes of conduct that includes both internal and third party auditing programs of tobacco leaf suppliers. Importantly, auditing scope is restricted to only direct (tier 1) suppliers, and excludes auditing of labor practices at the farm level where poor labor practices are common, with the exception of PMI. PMI is the only company in the set that has taken steps to monitor labor standards at the farm level.**

Tobacco companies will face increased regulatory and public scrutiny regarding poor labor practices along their supply chains; companies have already been targeted by NGO reports specifically with regard to poor labor standards at tobacco farms, where workers are exposed to pesticide and nicotine poisoning. The UK Modern Slavery Act (passed in Parliament in March 2015) and, in the US, the California Transparency in Supply Chains Act, require that companies disclose steps taken (if any) to help ensure that their supply chains are free from slave labor and human trafficking. The newly passed UK Modern Slavery Act applies to companies with sales or operations in the UK and with annual turnover at least GBP 36 million (roughly USD 56 million). In July 2015, the US House of Representatives also introduced an amendment to the Securities and Exchange Act, requiring that companies with more than USD 100 million in sales disclose efforts to identify and address forced labor, slavery, child labor, and human trafficking along their supply chains. Human Rights Watch's 2014 report already highlighted the global problem of child labor, focusing specifically on child labor on US tobacco farms.

Tobacco companies purchase most of their tobacco leaves from large international leaf suppliers, which in turn purchase tobacco leaf from farmers often located in non-OECD countries. For example, more than 70% of PMI's tobacco is purchased from the following countries: Brazil, Turkey, the US, Malawi, Indonesia, China, Argentina, the Philippines, Mozambique, and Tanzania. The largest tobacco leaf exporters include countries such as Brazil, India, China, and Turkey. While the US is also a large tobacco leaf producer, most of its production is used locally by US-based companies. Overall, we estimate that a typical US-based company sources less than half of its tobacco leaves domestically, and as a result relies on emerging markets for a large share of its tobacco leaf supply. Consequently, tobacco companies are at risk of being associated with child labor and poor health standards (e.g., Green Tobacco Sickness) when sourcing from markets where there are poor regulatory frameworks regarding fair labor practices, and where labor regulation is rarely enforced.

Tobacco companies continue to have poor management programs in general to tackle this issue, which encompasses a complex dynamic of structures and power relations within the tobacco leaf market. The industry's overall failure to address poor labor practices is primarily due to the fact that companies have yet to identify the tobacco farms supplying them with tobacco. As a result, we believe these companies, including the largest players such as **Japan Tobacco** and **Philip Morris** are particularly at risk of being targeted by NGO reports in the future and could consequently face brand damage, despite some minor improvements in oversight of labor standards along their supply chains that we are seeing over time. Over 50% of companies face controversies related to labor practice standards.

Only 20% of companies including **Reynolds American, ITC Ltd.,** and **Philip Morris Reynolds American** have established programs to audit suppliers' compliance with codes of conduct that includes both internal and third party auditing programs of tobacco leaf suppliers. Importantly, auditing scope is restricted to only direct (tier 1) suppliers, and excludes auditing of labor practices at the farm level where poor labor practices are common, with the exception of **PMI.** PMI is the only company in the set that has taken steps to monitor labor standards at the farm level. However, the scope of auditing applies only to purchasing systems where PMI has contractual relationships directly with small scale farmers or large third party suppliers, and excludes tobacco purchased through auction or middlemen systems, (covering 20% of its purchasing and including tobacco purchased from countries like Malawi, India, and Indonesia).

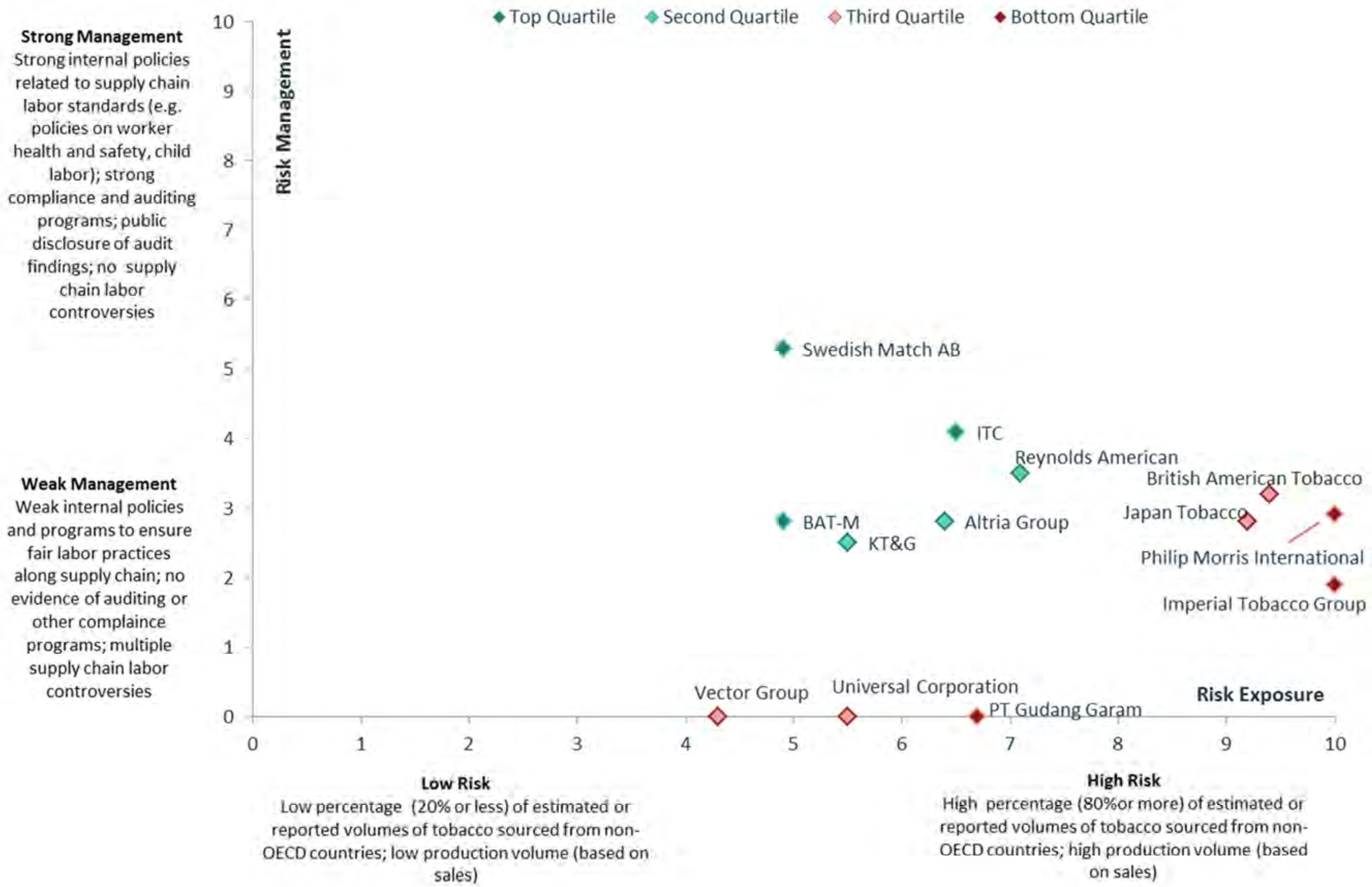
Japan Tobacco has made strides in the oversight of its labor practice programs, with third parties responsible for monitoring tier 1 suppliers' compliance with labor practices, although details regarding the scope of the audit programs remain limited. In 2014 its agricultural labor practices applied to 7% of the company's directly contracted farmers (tier 1 only), and Japan Tobacco reports that its labor practices will begin to cover third party leaf suppliers in 2016. Although an improvement, its efforts thus far are insubstantial to counter its high brand risk that it faces with regard to potential supply chain labor issues.

Less than one-half of companies (46%) disclose information on instances of non-compliance with labor standards along their supply chains; companies that are among those that disclose such information include **Altria**, **Imperial Tobacco**, **Reynolds American**, **Swedish Match**, and **ITC Ltd.** However, the scope of reporting is often limited to certain markets or only covers direct suppliers and does not extend to tobacco leaf farms, where poor labor practices are prevalent. Of most concern, there is no evidence that **PT Gudang Garam, Alliance One,** or **Vector Group** monitor or assess suppliers' compliance with labor standards.

BEST PRACTICES Swedish Match, Philip Morris	**Swedish Match** oversees compliance by auditing all tier 1 suppliers and training suppliers on labor standards. The company's major tobacco suppliers (defined as suppliers from which the company purchases greater than USD 100,000 per year) are required to commit to specific business ethics, human rights, and health and safety requirements. **Philip Morris** is the only company in the set that has taken steps to monitor labor standards at the farm level; however this excludes tobacco purchased through auction or middlemen systems.
BIGGEST CONCERNS PT Gudang Garam	There is no evidence that the company audits labor practices at tobacco leaf farms, nor does its commit to supplier compliance training.

FIGURE 6 **Company Performance on Supply Chain Labor**

Description: Risk exposure is evaluated based on the estimated or reported volumes of tobacco sourced from non-OECD countries. Risk management along the y-axis combines an assessment of the strength of companies' internal policies and codes of conduct benchmarked against ILO standards, internal and external audits of supplier base (direct and also at the farm level), transparency on audit findings, and supply chain controversies.



Biodiversity & land use

Key Takeaways

- **Most companies fail to address the deforestation and biodiversity problems occurring at the tobacco farm level.**
- **Roughly 15% of companies carry out community impact assessments prior to settling into new areas and have clear targets regarding land use in relation to protecting biodiversity (ITC, BAT PLC).**

Industry's Contribution to Externality	**HIGH IMPACT** The main environmental impacts of tobacco growing are related to deforestation as trees are cut down to make room for tobacco crops and for curing (drying) of tobacco leaves. Tobacco leaches the soil of various nutrients, requiring fertilizers and pesticides in tobacco production, creating runoff that pollutes the environment. In addition, tobacco leaf farming causes significant biodiversity losses including but not limited to land pollution (due to the heavy use of pesticides), water pollution, and deterioration of soils from the use of agrochemicals and intensive farming practices.
Time Horizon of Risk / Opportunities Resulting from Externality	**MEDIUM TERM RISK (*2-5 years*)** Resource depletion and land degradation are environmental factors compromising the continued availability of key agricultural commodities in large quantities and for a viable price. Companies are under pressure by third party watchdogs to be accountable for biodiversity losses and environmental damage due to their operations. Companies with poor biodiversity management practices could face operational disruptions, penalties, and risk brand damage.
Main Risks / Opportunities	penalties; increased costs due to land protection/reclamation; brand/reputational damage

We assess companies' programs and performance related to their management of agrochemicals, efforts to control pollution, and activities aimed at reducing wood consumption, along with reforestation programs at the farm level. **No companies have implemented programs aimed at reclaiming habitat/disturbed land**, although we find that nearly one-half of companies (46%) are at a minimum involved in efforts to minimize disturbances from their operations; e.g., **Imperial Tobacco** has internal programs that address biodiversity, including working with tobacco leaf famers in Madagascar, Vietnam, and Laos to reduce the use of pesticides, make improvements to flue-curing barns to improve fuel efficiency. **ITC Ltd.** also stands out positively in that it has outlined quantitative targets related to biodiversity, including achieving zero effluent discharge through treating and recycling wastewater, although it is not clear whether this extends to supplier's operations.

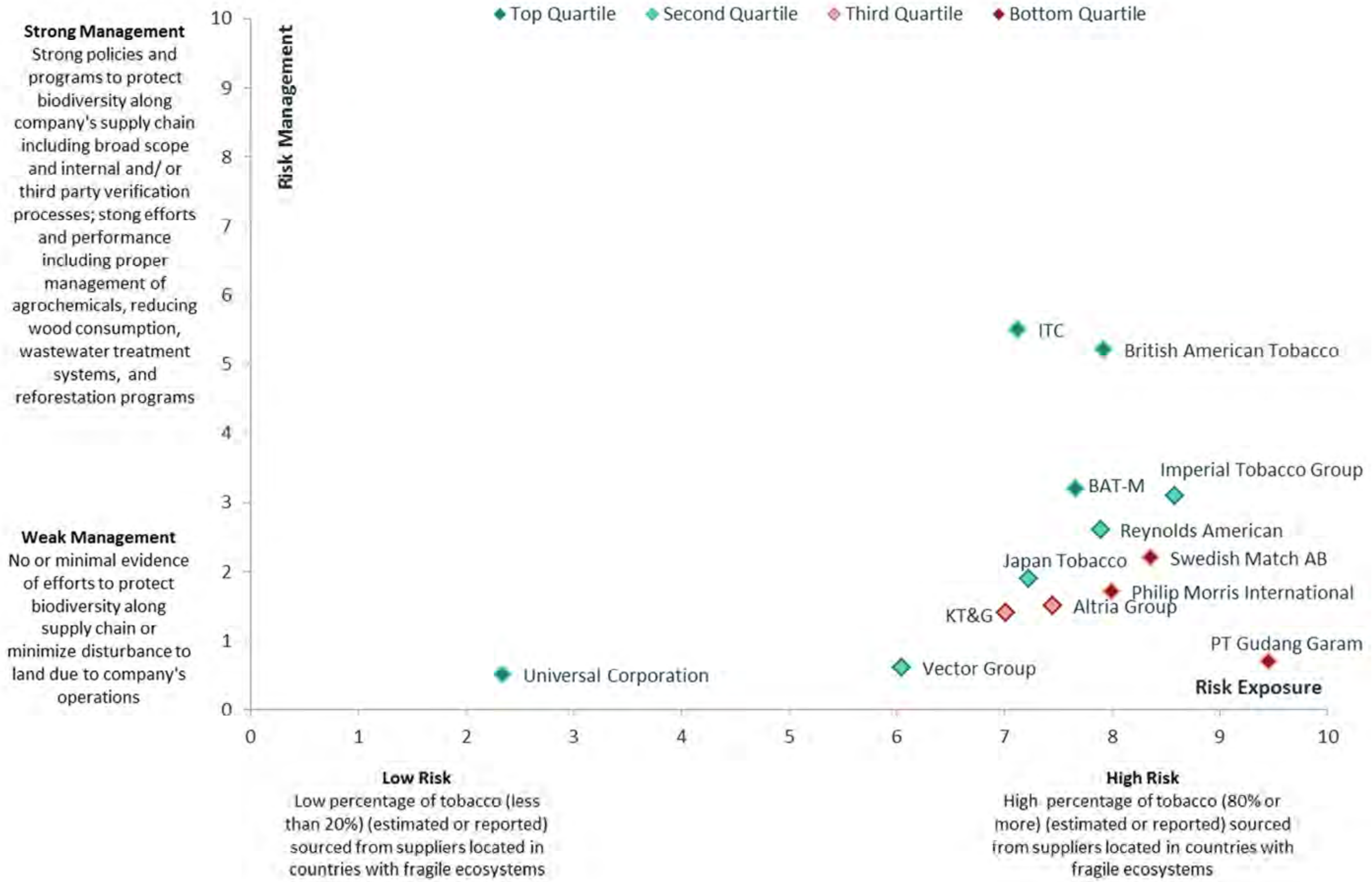
Only British American Tobacco and ITC Ltd. appear to go a step further and conduct both community and biodiversity impact assessments before settling into new areas, serving to protect their brand equity, while seeking to ensure long term land availability in a context of more stringent rules governing the acquisition or farming of tobacco and other agricultural goods. **Reynolds American** has also strategically positioned itself in the market of organic tobacco farming. The company's Santa Fe subsidiary manufactures Natural American Spirit additive-free tobacco products using organic certified tobacco or tobacco that meets certain environmental standards (including avoiding the use of the most hazardous pesticides), and utilizes sample testing to ensure that no residual pesticides reside in the final product.

Overall, **ITC** (based in India) and **British American Tobacco** positively stand out in their efforts to address biodiversity risks that some of the largest companies like PMI have failed to tackle.

BEST PRACTICES BAT	**BAT** aims to achieve zero use of natural forest for curing fuels used by directly contracted farmers by 2015, and in its main tobacco growing districts (Uganda, Hoima and Arua), BAT conducts biodiversity impact assessments (in partnership with three international NGOs).
BIGGEST CONCERNS PT Gudang Garam	The company does not appear to have comprehensive policies in place to manage its impact on biodiversity and local communities (beyond some reforestation programs). Its limited programs could not only compromise the long term fertility of tobacco crops, but could also result in reputational risk related to deforestation and biodiversity destruction, should poor environmental practices be uncovered along its supply chain.

FIGURE 7 **Company Performance on Biodiversity and Land Use**

Description: Risk exposure is evaluated based on the percent of tobacco leaf (estimated or reported) sourced from countries with territories in threatened ecoregions and with rich biodiversity. Risk management along the y-axis combines an assessment of biodiversity and land use policy, standards and verifications related to biodiversity standards, as well as programs and performance to minimize disturbances to land, water, and protection of natural ecosystems.



 Please refer to the disclaimer at the end of this document.

Water Stress

Industry's Contribution to Externality	**MEDIUM IMPACT** Globally, agriculture accounts for 70% of water withdrawal, with industry and domestic use accounting for the remaining 20% and 10% of water use, respectively. As a crop, tobacco requires 30% more water than regular grass (on par with sugarcane, bananas), and substantially more water than other crops such as tomatoes, cotton, beans, and maize (requiring 10% more water than ordinary grass). As such, agriculture and particularly tobacco contributes to growing water scarcity globally, and is by far the most affected sector that is and will be most impacted by water stress going forward.
Time Horizon of Risk / Opportunities Resulting from Externality	**MEDIUM TERM RISK (*2-5 years*)** With the global population rising (at a rate of approximately 80 million people/year), greater affluence, changes in lifestyles and eating habits, and a trend toward shifting water use from agriculture to higher value urban and industrial uses, pressure on water resources will increase. Companies that develop efficiencies in their water use in manufacturing and particularly at the farm level will be better prepared to face increased water scarcity risks.
Main Risks / Opportunities	Raw material cost increases, operational disruptions from water scarcity

Key Takeaways

- **Companies' programs are largely focused exclusively on water scarcity risks within their own manufacturing operations; however, some companies have started to address water risks along their supply chains (Imperial Tobacco, BAT)**
- **Water stress will impact tobacco companies mostly through higher raw material prices, and in some cases in the form of operational costs or manufacturing disruptions**

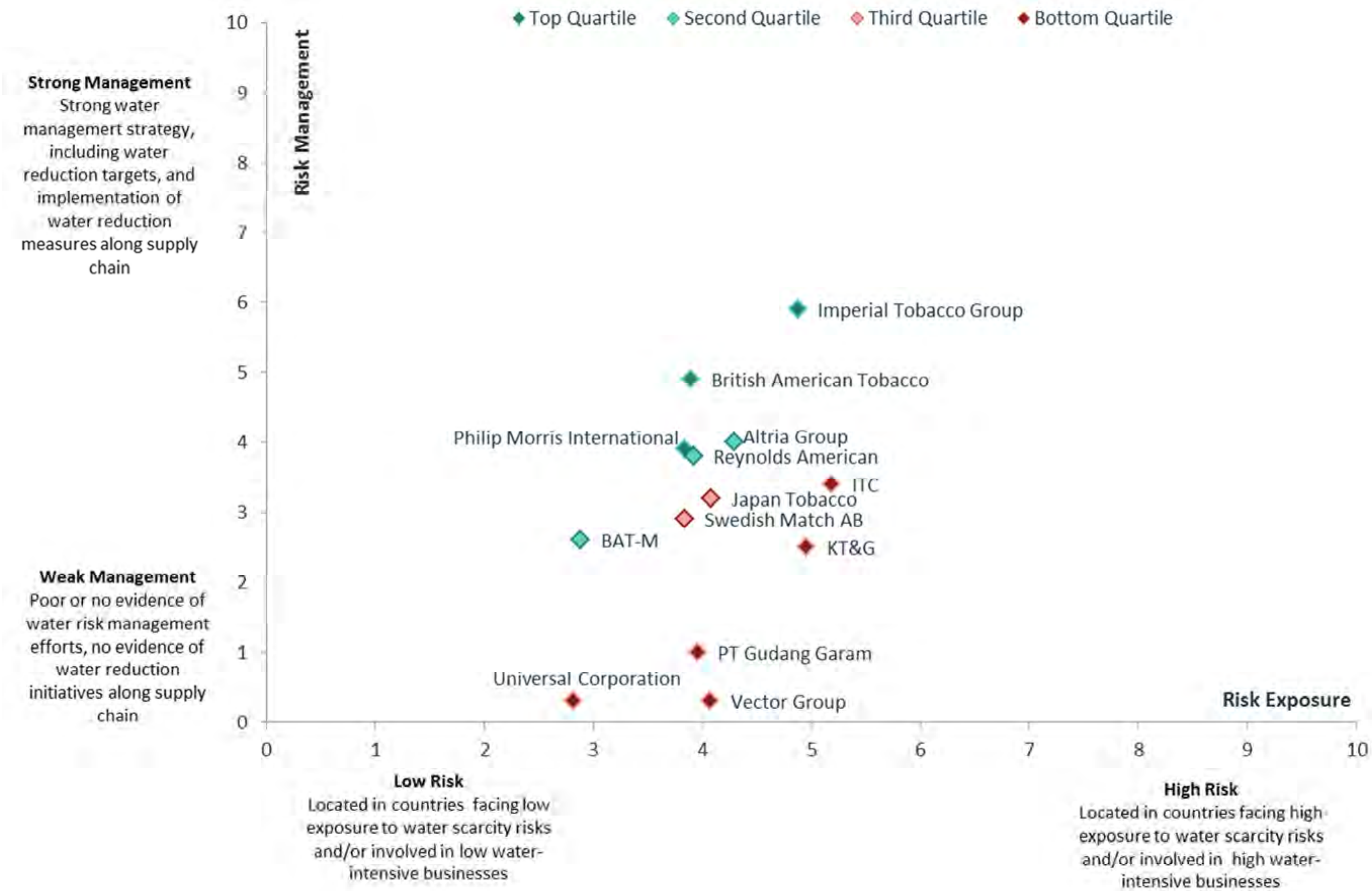
Less than 50% of companies have implemented water efficiency measures in their production processes and display evidence of using alternative water sources. Although roughly 55% of companies have water reduction targets, targets are exclusively focused on companies' own operations (vs. along companies' supply chains at the tobacco growing level, where water scarcity risks are most acute).

Imperial Tobacco is the clear industry leader with regard to addressing water scarcity risks; on the opposite end of the spectrum, PT Gudang Garam fails to address water scarcity risks. Imperial Tobacco aims to reduce water use by 10% by 2020, with a baseline of 2009 by making improvements in waste water discharge systems, recycling air conditioning water, improving water metering, and using rainwater for sanitary facilities to reduce water consumption. Notably, Imperial Tobacco has also taken steps to identify water stress related risks along its supply chain; it reports that it has identified the majority of water-related impacts along its supply chain. BAT and PMI, which also perform above average compared to peers, have reported water reduction targets yet fail to address water consumption along their supply chains. PMI has various programs to achieve reductions in water use - installing water control valves, reducing equipment washing time, reusing manufacturing process water, revising irrigation procedures, and metering and building management systems. Importantly, BAT, however, states that it is conducting assessments related to its long-term water supply in high risk regions, which should position it to better mitigate potential water-related risks. Companies least well positioned to address water scarcity risks relate include PT Garam and ITC Ltd.

BEST PRACTICES Imperial Tobacco	**Imperial Tobacco** has outlined clear water reduction targets and programs for how it plans to achieve its targets. It has also begun to identify water-related risks along its supply chain (one of the few companies in the peer set to do so).
BIGGEST CONCERNS PT Gudang Garam	The company has not publicly articulated a strategy for achieving water reductions.

FIGURE 8 **Company Performance on Water Stress**

Description: Risk exposure is evaluated based on the water intensity of a company's business segments and the percentage of territory facing water stress in countries where a company has operations or sources its raw materials. Risk management along the y-axis combines an assessment of the strength of companies' mitigation strategies, the strength of reduction targets, and the company's water intensity and trend in its operations and supply chain, as well as controversies.



Chemical safety

KEY TAKEAWAYS

- **Reynolds American will face new chemical regulatory risks, driven by its acquisition of Lorillard due to its reliance on menthol-based products; the combined company owns over one-third tobacco market share in the US.**
- **Nearly 50% of companies including British American Tobacco, Reynolds American, Swedish Match, Imperial Tobacco, Japan Tobacco, and PMI have committed to integrate health standards into new products.**

Industry's Contribution to Externality	**MEDIUM IMPACT** Tobacco companies operate under stringent regulatory scrutiny regarding the sale of tobacco products, which have been shown to cause diseases including various forms of cancer. Tobacco use is also a risk factor for some of the leading causes of death worldwide, including ischaemic heart disease, cerebrovascular disease, and lower respiratory infections. Tobacco smoke alone contains over 4,000 chemicals, at least 60 of which are known carcinogens. As a consequence, companies face constant risk of consumer and government lawsuits seeking compensation not only for the negative impacts of their products on human health but also for the resulting economic burdens placed on healthcare systems.
Time Horizon of Risk / Opportunities Resulting from Externality	**MEDIUM TERM RISK (*2-5 years*)** As the WHO's Framework Convention on Tobacco Control gains momentum globally as a tool to increase tobacco control in both developed and developing countries, companies are facing increasingly stringent regulatory environments. Articles 9 and 10 of the Treaty call for regulating the content of tobacco products and tobacco product disclosures. In the EU, the European Parliament recently voted to ban flavored tobacco (vanilla, fruit, and menthol). An emerging regulatory risk that investors will need to monitor is companies' ability to continue to use certain additives in their products, and risks of reformulation costs if specific ingredients are banned. The WHO has reported that flavored cigarettes encourage people to smoke more and develop tobacco-related diseases, such as cancers, cardiovascular disease, and chronic lung disease.
Main Risks / Opportunities	regulatory risks; potential reformulation costs; lawsuits

With cigarette smoke containing over 4,000 hazardous chemicals and more than 43 cancer-causing agents, companies **could face reformulation risks should specific chemicals and additives (e.g., humectants, sugars and flavorings) be banned**. Menthol flavoring in particular has faced increased scrutiny by the US FDA and the EU as an additive to cigarettes because the associated mint-flavored and cooling sensation reduces the harshness of tobacco smoke and is therefore often cited as a popular option for those first beginning to smoke. Menthol flavored cigarettes have also been widely criticized for their disproportionate use by ethnic minorities, youth, and people of lower socio-economic status. Menthol cigarettes will begin to be phased out in the EU beginning in 2020 as part of the Tobacco Products Directive 2014. Although menthol has not been banned to date on a US federal level, some local governments in the US have already taken steps to curtail consumer exposure to menthol-based cigarettes (e.g. Chicago, Illinois and Berkeley, California), particularly around schools.

Reynolds American's merger with US competitor Lorillard, initially announced in July 2014 for USD 27.4 billion, introduced new chemical regulatory risks for the company, as former Lorillard faced substantial regulatory pressure from the sale of menthol cigarettes (via its key Newport brand). **The combined company will be more impacted than peers should bans on flavor additives in the US be expanded to include menthol.**

With the growing demand for e-cigarettes and as yet uncertain regulatory landscape, many companies have shifted to incorporate 'healthier' products such as e-cigarettes into their portfolios. Most companies have introduced or have already launched e-cigarettes as part of their product offerings, including **Reynolds American** (Vuse), **Altria** (MarkTen), and **Imperial Tobacco** (Puritane); however, for conventional tobacco companies, a shift from conventional cigarettes to new technologies including e-cigarettes represents a radical shift in business models. 'Vaping', the process of inhaling nicotine-infused vapor produced by heating, rather than burning, of tobacco, has been viewed by some as less harmful to health than traditional cigarettes. However, e-cigarettes are still subject to flavoring bans and other additive bans due to the presence of known carcinogens, toxins, and metal nanoparticles in e-cigarette vapor. As such, **any industry shifts to e-cigarettes will most likely not**

mitigate risks of potential reformulation costs if certain high risk additives or flavorings are banned.

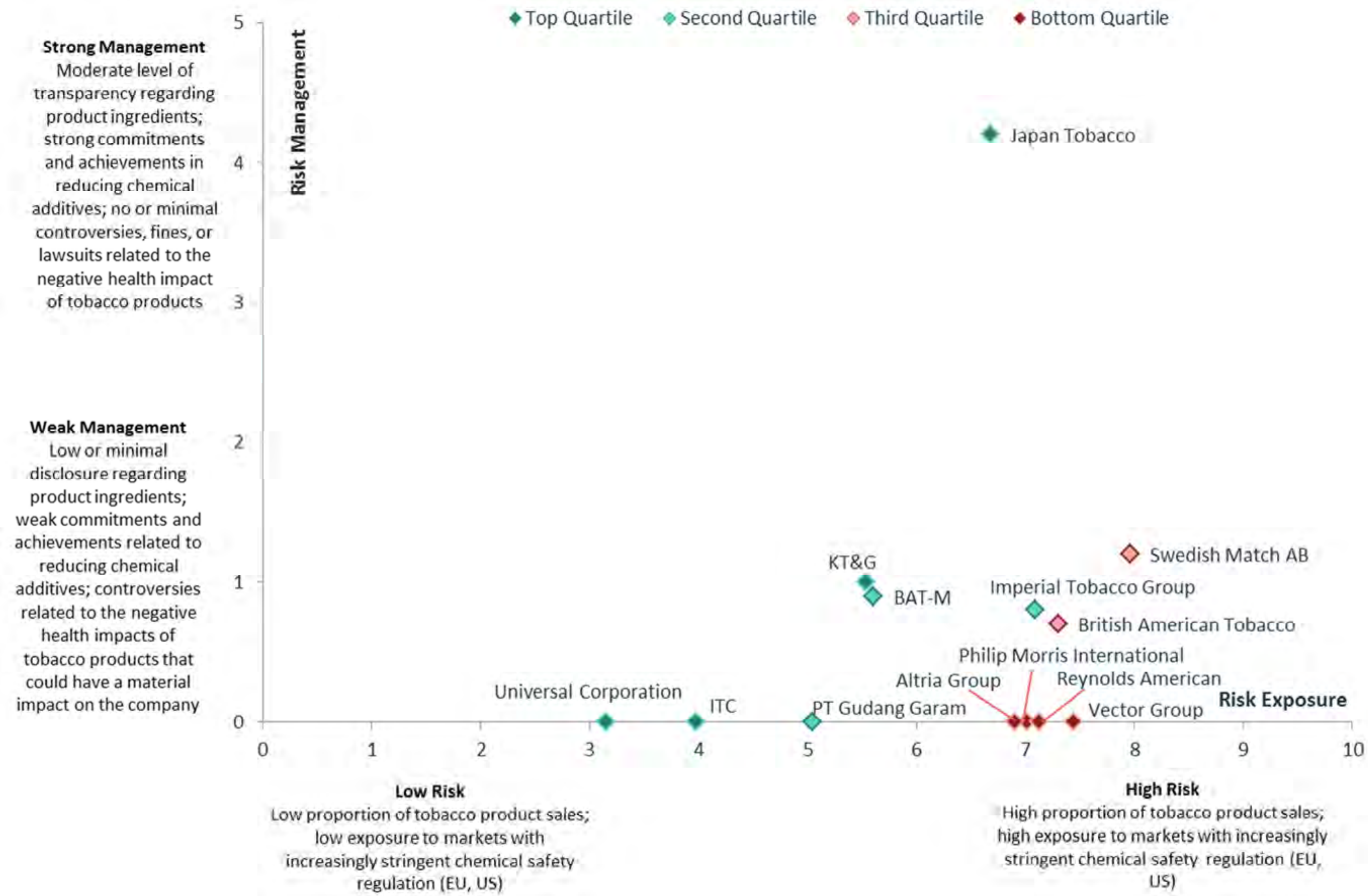
We examine companies' R&D programs related to the elimination of certain additives from their products as well as companies' transparency with regard to the ingredients (additives, flavorings, filters, adhesives, hardening agents, and any genetically modified components that are smoked, inhaled, or chewed), as indicators of exposure to future lawsuits alleging hazardous ingredients to consumers and overall preparedness for regulatory changes. More companies are committing to incorporate health considerations into the design of new products since our last analysis, such as developing reduced toxicant cigarettes, or nicotine replacement alternatives. However, **no companies have set targeted, time-bound goals to phase out specific toxic additives or flavorings from their products.**

Nearly 50% of companies including **British American Tobacco**, **Reynolds American**, **Swedish Match, Imperial Tobacco, Japan Tobacco, and PMI** have committed to integrate health standards into new products. The establishment of R&D programs to develop 'healthier' tobacco product alternatives could create a competitive edge for these companies. **BAT** commits to explore the development of products that are allegedly less hazardous to health (substitute nicotine products), and recognized as such by consumers and regulatory agencies. To this end, in 2014 Nicoventures launched its first cigarette alternative device, Voke, which was approved by UK regulatory authorities as a licensed medical device. Voke (based on asthma inhaler technology) delivers a nicotine formulation via a cigarette-sized medical device that requires no electronics, heat, or combustion. Alternative products such as these reduced toxicant cigarettes and other low toxicant smokeless options could create a competitive advantage for companies. Companies continue to lack full and comprehensive disclosure of product formulations beyond aggregate ingredient lists. **British American Tobacco** has among the highest (de-aggregated) level of disclosure compared to peers, e.g., disclosing additives by brand, product type, and variant.

BEST PRACTICES BAT	BAT commits to incorporate less harmful substances in its product design. BAT has a relatively high level of transparency regarding ingredients in its products relative to peers, including disclosure of ingredients for brands sold in over 170 countries. The company discloses a list of ingredients in its tobacco products, including tobacco-related ingredients, non-tobacco ingredients, and the function of the ingredient.
BIGGEST CONCERNS Vector Group	**Vector Group** does not disclose product ingredient information, and as such could be ill-prepared to respond to any potential shifts in regulation that could place restrictions on additives in cigarettes.

FIGURE 9 **Company Performance on Chemical Safety**

Description: Risk exposure is evaluated based on the percent of operations in countries with pending or strengthening regulations and in product segments with high intensity of chemical use. Risk management along the y-axis includes assessment of companies' level of transparency on product ingredients, commitment and performance in reducing the use of certain additives, and controversies related to the negative health impacts of tobacco products.



Corporate Governance

KEY TAKEAWAYS

Strong performers with respect to overall corporate governance practices include Imperial Tobacco and Swedish Match; Swedish Match in particular stands out, with Best in class performance with respect to both Pay and Ownership structures. On the other hand, poor performers include Vector Group, Reynolds American, and Japan Tobacco.

Most corporate governance concerns in the Tobacco industry (compared to global peers) relate to Accounting practices. More than 15% of companies are considered worst in class compared to home market peers with regard to accounting (Japan Tobacco and Reynolds American). Vector Group is considered worst in class with regard to its board structures, and several companies perform poorly (below average compared to global peers) with respect to pay – including KT&G, PT Gudang Garam, Philip Morris International, and Vector Group.

FIGURE 10 **Companies' Governance Performance Relative to Global Peers**

FIGURE 11 **Key Data on Performance on Corporate Governance**

Company	Corporate Governance Assessment								Controversies – Governance Structures	Corporate Governance Score
	Board Performance		Pay Performance		Ownership & Control Performance		Accounting Performance			
	vs. Home Market Peers	vs. Global Peers	vs. Home Market Peers	vs. Global Peers	vs. Home Market Peers	vs. Global Peers	vs. Home Market Peers	vs. Global Peers		
IMPERIAL TOBACCO GROUP PLC	Above Average	Above Average	Average	Best In Class	Average	Average	Average	Average	Green	8.7
Swedish Match AB	Above Average	Above Average	Best In Class	Best In Class	Average	Average	Average	Average	Green	8.3
BRITISH AMERICAN TOBACCO (MALAYSIA) BERHAD	Average	Average	Above Average	Above Average	Average	Average	Above Average	Above Average	Green	7.7
ITC LIMITED	Average	Average	Above Average	Above Average	Above Average	Above Average	Average	Average	Green	7.3
UNIVERSAL CORPORATION	Above Average	Above Average	Above Average	Average	Average	Average	Average	Average	Green	6.4
BRITISH AMERICAN TOBACCO P.L.C.	Average	Average	Average	Best In Class	Average	Average	Below Average	Below Average	Green	6.2
Altria Group, Inc.	Average	Average	Above Average	Average	Average	Average	Average	Average	Green	5.9
KT&G Corporation	Above Average	Average	Average	Below Average	Average	Average	Below Average	Below Average	Green	5.5
PT Gudang Garam Tbk	Average	Average	Average	Below Average	Below Average	Below Average	Average	Average	Green	4.3
Philip Morris International Inc.	Average	Average	Below Average	Below Average	Average	Average	Average	Average	Green	4.3
JAPAN TOBACCO INC.	Above Average	Average	Above Average	Average	Best In Class	Best In Class	Worst In Class	Worst In Class	Green	3.9
REYNOLDS AMERICAN INC.	Average	Average	Average	Average	Average	Below Average	Worst In Class	Worst In Class	Green	3.8
VECTOR GROUP LTD.	Worst In Class	Worst In Class	Below Average	Below Average	Best In Class	Average	Average	Average	Green	2.3

Appendix A: Analytical Set

The Tobacco industry peer set is comprised of the following:

		Country	Rating		
Tobacco			2014	**2015**	
PM	Philip Morris International Inc.	US	CCC	**B**	Upgrade
BATS	BRITISH AMERICAN TOBACCO P.L.C.	GB	BBB	**BBB**	Maintain
MO	Altria Group, Inc.	US	BB	**BBB**	Upgrade
2914	JAPAN TOBACCO INC.	JP	B	**BB**	Upgrade
ITC	ITC LIMITED	IN	BBB	**A**	Upgrade
IMT	IMPERIAL TOBACCO GROUP PLC	GB	BB	**BBB**	Upgrade
RAI	REYNOLDS AMERICAN INC.	US	BB	**BB**	Maintain
SWMA	Swedish Match AB	SE	A	**A**	Maintain
033780	KT&G Corporation	KR	A	**BB**	Downgrade
GGRM	PT Gudang Garam Tbk	ID	CCC	**CCC**	Maintain
BAT	BRITISH AMERICAN TOBACCO (MALAYSIA) BERHAD	MY	AA	**AA**	Maintain
VGR	VECTOR GROUP LTD.	US	B	**BB**	Upgrade
UVV	UNIVERSAL CORPORATION	US	BBB	**BBB**	Maintain

Appendix B: Key Issue Selection and Weight

To select Key ESG Issues for each industry and determine weights, we combine (1) the level of contribution of the industry to a given environmental or social externality and (2) the expected time frame for risks/opportunities to materialize. For more details on the methodology, see Methodology Document for further details.

Tobacco

	Low Contribution to Externality	Moderate Contribution to Externality	High Contribution to Externality
Short Term (<2 years)			Product Safety & Quality/responsible marketing (21%)
Medium Term (2-5 years)		Water Stress (14%) Chemical Safety (14%)	Biodiversity & Land Use (18%) Supply Chain Labor Standards (18%)
Long Term (>5 years)			Corporate Governance (15%)

Tobacco*

	Low Contribution to Externality	Moderate Contribution to Externality	High Contribution to Externality
Short Term (<2 years)			Product Safety & Quality/responsible marketing (20%)
Medium Term (2-5 years)		Water Stress (13%) Chemical Safety (13%)	Biodiversity & Land Use (17%) Supply Chain Labor Standards (17%)
Long Term (>5 years)	Business Ethics &Fraud (7%)		Corporate Governance (13%)

** For companies with notable controversies, Business Ethics & Fraud was added as a key issue, reducing the weight on the remaining issues*

Company-Specific Key Issues

A few of companies in the Tobacco Industry were analyzed using company specific key issues (i.e., Business Ethics & Fraud). The criteria for identifying company specific issues include significant level of involvement in business lines specific for these companies (at least 20% of revenue) or notable controversies around specific corporate practices (red flags).

Appendix C: Scoring Methodology

In summary, 100% of the assessment was based on the following key issues and indicators:

Key Issue	Risk Exposure Indicators	Risk Management Indicators
Water Stress	» Percent of operations in business segments with high water intensity *source: IERS' Comprehensive Environmental Data Archive (CEDA) data* » Percent of operations in countries with high % of territory affected by oversubscription of water resources *Source: University of New Hampshire's Water Systems Analysis Group*	» Water efficiency targets and processes » % of alternative water used (grey water, rain water, etc.) » Water recycling / recirculation rate » Reported water efficiency performance *Source: company disclosure, NGO reports, news searches*
Chemical Safety	» Percent of operations in countries with pending or strengthening regulations *source: MSCI ESG Research* » Percent of operations in product segments with high intensity of chemical use *source: ChemSec SIN List and MSCI ESG Research*	» Ingredient (additive) identification and screening strategy » Additive substances phase-out strategy » Product labelling and formulation transparency » Chemical safety controversies *source: company disclosure, NGO reports, news searches*
Product Safety and Quality	» Volume of products (using total sales as proxy) *Source: Company disclosure* » Companies' level of exposure to product quality issues according to business segments defined by Standard Industrial Classification (SIC) codes. *Source: MSCI ESG Research*	» Existence of marketing policy, including prohibiting of marketing to youth » Existence of training programs » Audit or other control procedures to ensure compliance with marketing policy » Transparency on non-compliance *source: company disclosure*
Supply Chain Labor Standards	» Percent of raw materials sourced from non-OECD countries *Source: company disclosure, MSCI ESG Research estimates* » Brand visibility *Source: third party consumer rankings* » 3-year average revenues (in USD) *Source: company disclosure*	» Strength of companies internal policies and codes of conduct, based on ILO standards » Compliance verification programs, including internal and external audits » Public disclosure of audit findings and remediation actions taken » Supply chain controversies *source: company disclosure, NGO reports, news searches*
Biodiversity and Land Use	» Percent of operations or raw materials (estimated or reported) sourced from countries facing high biodiversity risks *Source: % of territory in threatened ecoregions (Nature Conservancy and WWF); estimates of country richness and endemism in four terrestrial vertebrate classes and vascular plants (Convention on Biodiversity 2005); Composite index of relative biodiversity potential for each country (2008 World Bank WDI)*	» Biodiversity and land use policy, scope of policy » Standards and verification processes related to biodiversity standards » Programs to minimize disturbance to land, address disturbed areas, or protect natural ecosystems » Recent biodiversity or land use controversies and company responses *source: company disclosure, NGO reports, news searches*

Corporate Governance	» We do not measure exposure on this key issue;	» Board Pillar: Metrics that indicate independence of the board of directors and key board committees from company management, individual director qualifications; » Pay Pillar: Metrics that evaluate alignment of CEO and other executive pay practices with shareholder interests, including: pay figures where disclosed, sign-on and severance provisions, performance goals; » Ownership and Control Pillar: Metrics that highlight concerns regarding company ownership structure, such as controlling shareholders, dual class structure, takeover defenses, restrictions on shareholder action; » Accounting Pillar: Metrics that evaluate corporate transparency and reliability of reported financials Auditor, audit results, audit score, audit grade; » Controversies and corporate events. *Source: company disclosure, news searches*

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