

THE WASTE WE PRODUCE: STINKY GOLD?

by Alberto Calvo and Lorenzo Privitera

**The waste we produce:
stinky gold?**

Published by

Value Partners Management Consulting
Via Vespri Siciliani, 9
20146 Milano, Italy

February 2017

Written and edited by:

Alberto Calvo, Lorenzo Privitera

With the contribution of:

Andrea Sorbo, Thomas Dossi, Ginevra Zanuso

For more information on the issues raised
in the report please contact:

alberto.calvo@valuepartners.com

If you would like to subscribe
or to be removed from our mailing list
please write to:
subscription@valuepartners.com

valuepartners.com

Copyright

© Value Partners Management Consulting
All rights reserved

CONTENTS

SETTING THE STAGE IN ITALY	5
REGULATORY FRAMEWORK	5
WASTE MANAGEMENT VALUE CHAIN	11
COMPETITIVE ARENA	13
WHAT DRIVES THE BUSINESS (AKA WHAT PUSHES WASTE AROUND)	15
THE NEW SECULAR TREND: THE DECOUPLING EFFECT	15
“YOU SHALL NOT DISPOSE ANYMORE”	18
URBAN WASTE PRICING: FINALLY MAKING IT ATTRACTIVE FOR INVESTORS	19
HOW THE ITALIAN WASTE MARKET WILL LIKELY EVOLVE	21
VOLUMES AND PRICE EVOLUTION: OUR VIEW	21
THE FUTURE IS ALREADY HERE: GERMANY AS THE EUROPEAN BEST IN CLASS	22
CONCLUSIONS	25
AUTHORS	26
ABOUT VALUE PARTNERS	28

Despite the negative aura normally surrounding the word “waste” (making reference to the related green / health issues, pollution or social costs) both communities and businesses are looking at it today as an economic “resource to exploit”.

SETTING THE STAGE IN ITALY

Waste management is a complex industry, due to its specific market dynamics and a peculiar regulatory framework. Moreover, the Italian waste sector is characterized by a lack of detailed market information that makes it very difficult to fully understand the underlying mechanics.

Despite the negative aura normally surrounding the word “waste” (making reference to the related green / health issues, pollution or social costs) both communities and businesses are looking at it today as an economic “resource to exploit”. For this reason, in the recent years the whole industry is focusing on squeezing out the maximum possible value of each ton of waste managed, rather than simply disposing of it.

This new approach has actually led to a systemic change in the sector that is progressively becoming a real industrial footprint able to deal with complex recovery and recycling activities, energy production and ultimate waste disposal.

This perspective aims at illustrating Value Partners’ point of view about the business in Italy/EU, also taking a stance on how the waste industry is likely to evolve in the mid and long term, possibly spurring investment opportunities for financial investors.

Regulatory Framework

a. European objectives

To better understand the regulatory framework, it is crucial to divide waste into two different categories, starting from the waste producer:

Urban Waste: domestic waste produced by households and collected at public spaces such as streets and green areas. It can be further divided into differentiated and undifferentiated waste, depending on the collection system adopted by local municipalities. In 2014, Italy produced ~14 Mln tons of differentiated waste and ~16 Mln tons of undifferentiated waste, slightly picking up again after a general decrease in the last five years (CAGR ‘10-’14 urban waste: -2,2%) [see exhibit 1 next page].

Special Waste: waste from production or service activities (industrial, craft, sanitary, farming, commercial, etc.), also including waste from intermediate urban garbage treatment. In 2014, Italy produced ~130 Mln tons of special waste, mildly recovering after a slight volume decrease (CAGR ‘10-’14: -1,4%) [see exhibit 1 next page].

The current regulatory framework translates at national level guidelines and objectives from a comprehensive European strategy which, through a series of public policies, action plans and specific laws, is stirring each member state in the direction of establishing a fully green economy in the long term. More specifically, the aim is to minimize the negative impact of waste production and treatment on human and environmental health.

Moreover, the European strategy aims at fostering a “circular economy” based on a widespread culture of recycling that uses waste as an economic resource [see Exhibit 2].

This European strategy is deployed through a suite of directives that set the guiding principles to be followed by all member countries and specific targets for each member state to be achieved.

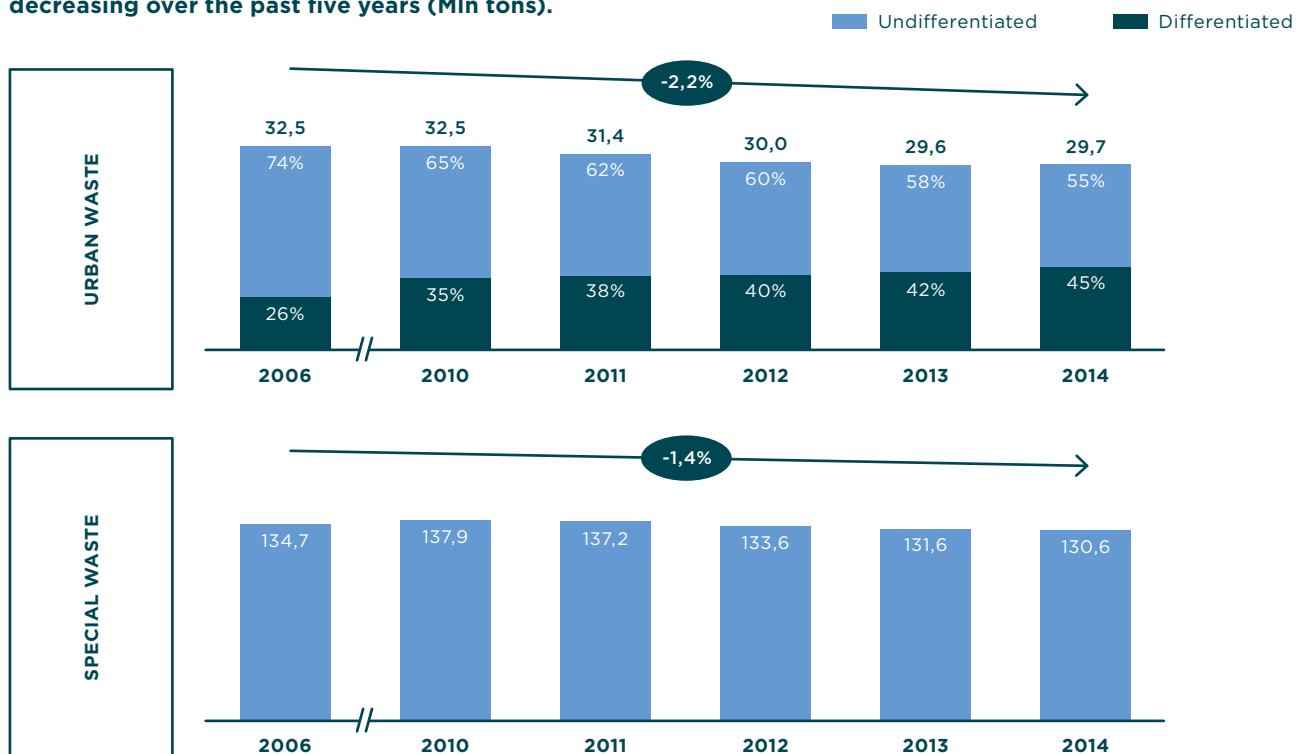
European principles

European directives have defined a set of principles that regulate and inspire how waste should be properly managed at country level.

Polluters pay: Those responsible for generating waste, and the related potentially adverse effects on the environment, should be required to pay the costs of avoiding or alleviating those adverse consequences.

EXHIBIT 1

In Italy, both urban and special waste market volumes have been decreasing over the past five years (Mln tons).

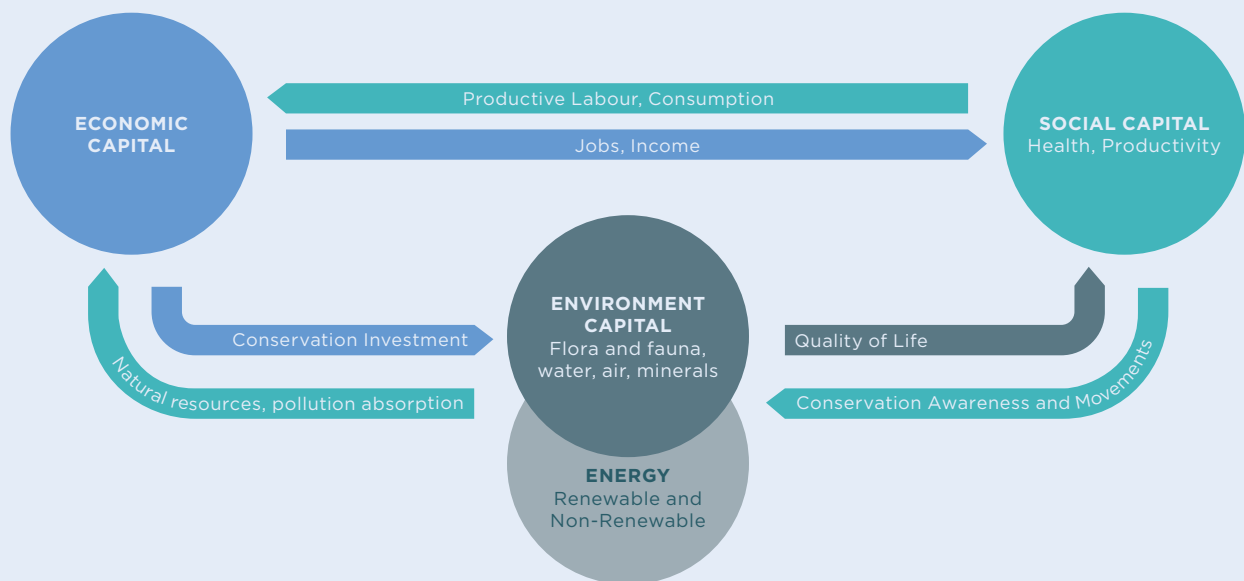


Source: ISPRA, VP analysis.

EXHIBIT 2

Europe promotes a “circular economy” based on a culture of recycling where waste is considered an economic resource.

THE GREEN ECONOMY HAS BEEN PROMOTING
“ZERO IMPACT” BUSINESS FOR YEARS ...



...ALSO LEVERAGING A “CIRCULAR ECONOMY”
SEEKING TO GIVE VALUE TO THE WASTE PRODUCED

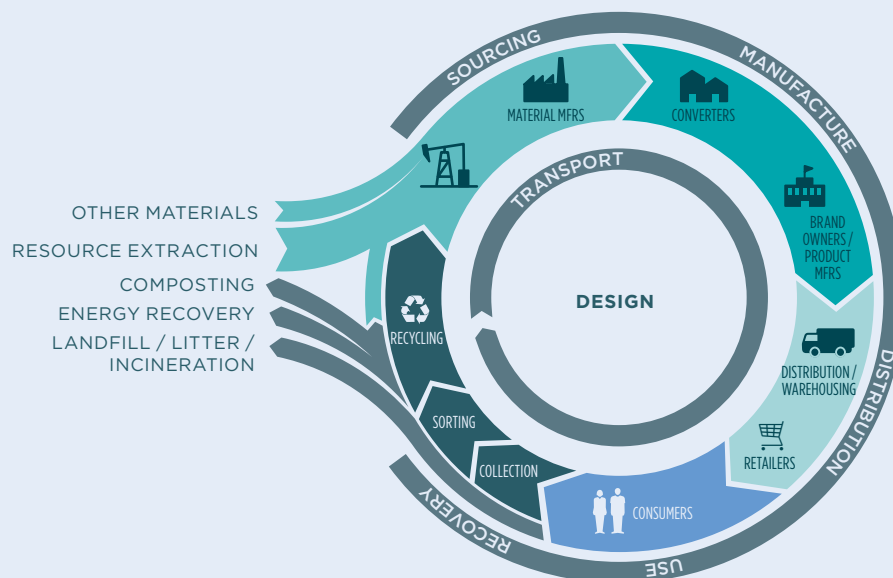


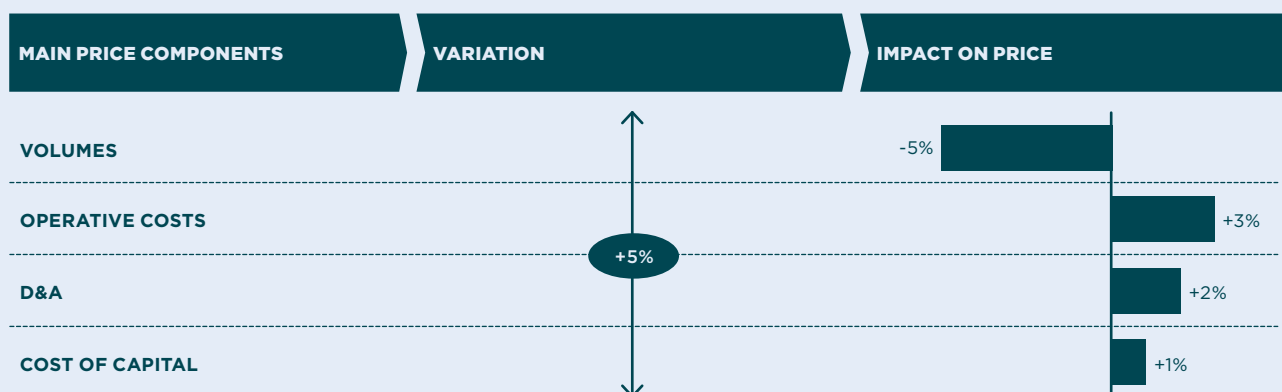
EXHIBIT 3

Unlike special waste, urban waste is a regulated market where price for waste management is defined by a specific formula.

WASTE TYPES	VOLUMES 2014, MLN TONS	DEFINITION	MARKET STRUCTURE	PRICING LOGICS
Urban differentiated	14	<ul style="list-style-type: none"> Domestic waste produced by households and collected at public spaces such as streets and green areas 	<ul style="list-style-type: none"> Regulated Exclusive competence of municipalities Mandatory to be managed within the borders of the waste producing Region (principles of independence and proximity) "Free market component" limited to the choice of contractors through tenders 	<ul style="list-style-type: none"> Covers company costs Guarantees a secured and pre-determined return on net assets
Urban undifferentiated	16			
Special	130	Waste from production or service activities (industrial, craft, sanitary, farming, commercial etc.), also including waste from intermediate urban garbage treatment	<ul style="list-style-type: none"> Subject to free market logics Contracts subscribed directly by clients and waste management companies No territorial constraints "Regulatory component" limited to high level principles concerning waste collection / treatment qualitative procedures 	<ul style="list-style-type: none"> Free market* Waste management tariffs are the result of market dynamics (volumes, commercial strategies, local competition, etc.)

EXHIBIT 4

Volume is the most relevant component driving urban waste treatment price per ton while operating costs have the greatest impact on price increase.



Note: * Not applicable to the share of special waste similar to urban waste, which is regulated as urban waste; such share weights <2% of special waste produced.
Source: ISPRA, VP analysis.

Producer responsibility: Economic operators, and particularly manufacturers of products, should be involved in the objective to oversee the whole life cycle of substances, components and products from their production throughout their useful life until they become waste.

Waste management hierarchy: Waste management strategies must primarily aim at preventing the generation of waste and at reducing its harmfulness. Where this is not possible, waste materials should be reused, recycled or recovered, or used as a source of energy. As a final resort, waste should be disposed of safely (e.g. by incineration or in landfill sites).

Proximity: Waste should be disposed of as close to its source as possible.

Self-sufficiency at Community and, if possible, at Member State level. Member States need to establish, in co-operation with other Member States, an integrated and adequate network of waste disposal facilities.

European targets

The European regulator has established a set of mandatory targets to be achieved by the end of 2020:

- 50% in terms of weight of recycling quota of urban waste
- 70% in terms of weight of recycling quota of special waste coming from the construction and demolition industry (C&D waste)
- Reduce biodegradable waste disposed of in landfills to 35%, encouraging recycling, composting, biogas production and material/energy recovery.

Moreover, there are also non-mandatory long term qualitative targets such as zero landfill usage, energy recovery from non-recyclable waste only and full control over waste production intensity.

b. Italian waste market regulation

The Italian waste market follows two different regulations, depending on the waste type:

1. Urban waste market regulation is of exclusive competence of municipalities, that have to manage the treatment and disposal within the borders of the waste producing Region. Moreover, the price for managing waste is set by a formula defined by the regulator: the underlying logic is to cover all the related management costs and to guarantee a secured and pre-determined return on investments to the economic players involved. [\[see Exhibit 3\]](#).

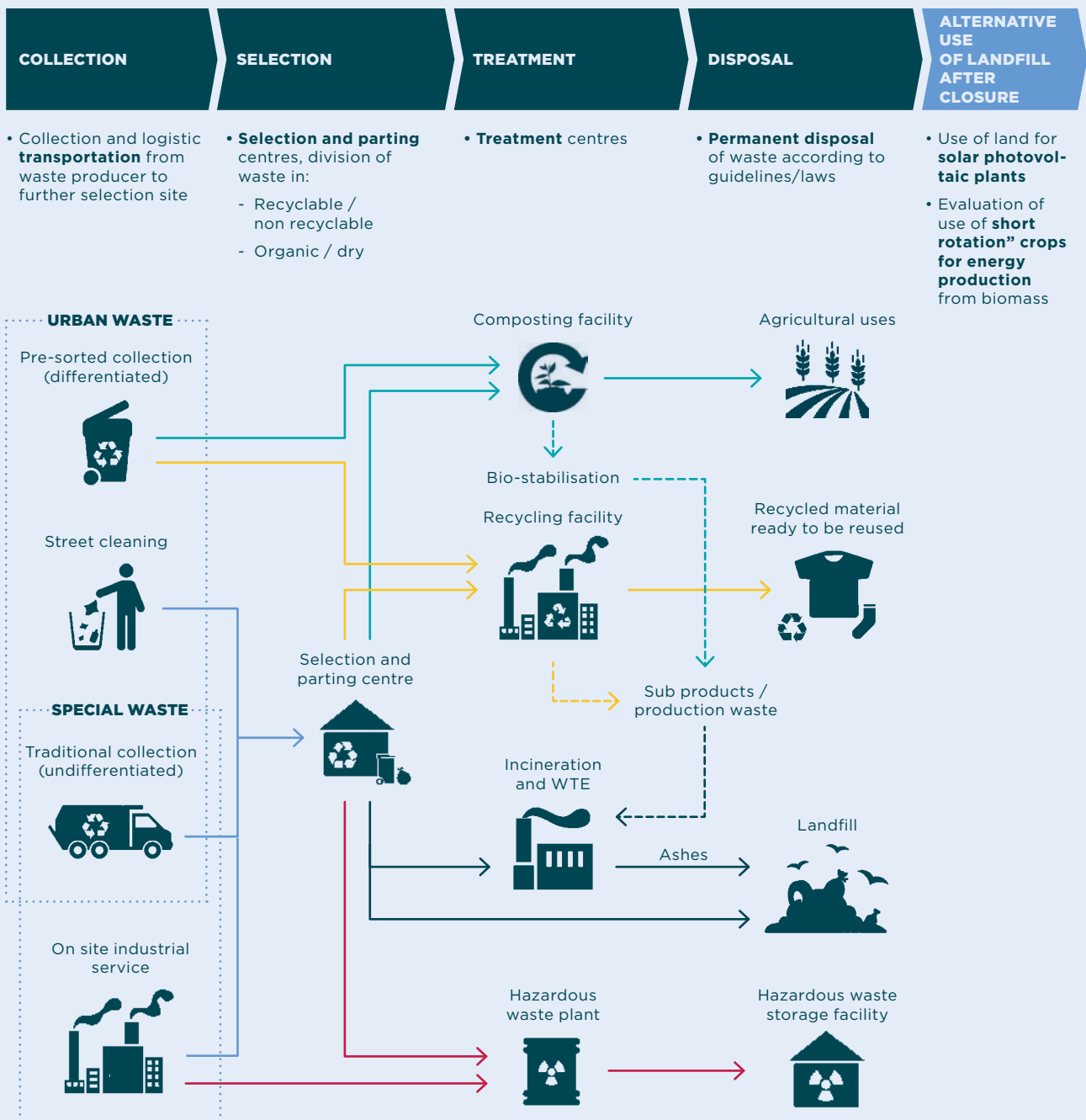
The main components driving urban waste treatment price per ton are operating costs, D&A, Cost of Capital incurred by market players, together with waste volumes. For example, a 5% variation in each of these components has a specific effect on price [\[see Exhibit 4\]](#). Volume is the single most relevant factor to change treatment price irrespective of swings in other correlated factors. On the costs side, operating costs have the greatest impact on price increase.

2. The special waste market is subject to the free market dynamics, with no territorial constraints. The only “regulatory element” is related to high-level principles concerning waste collection / treatment qualitative procedures.

EXHIBIT 5

The Waste Management value chain for urban and special waste is structured into 4 main steps.

→ Organic waste → Dry waste → Undifferentiated waste → Hazardous waste → Non recyclable waste



Waste management Value Chain

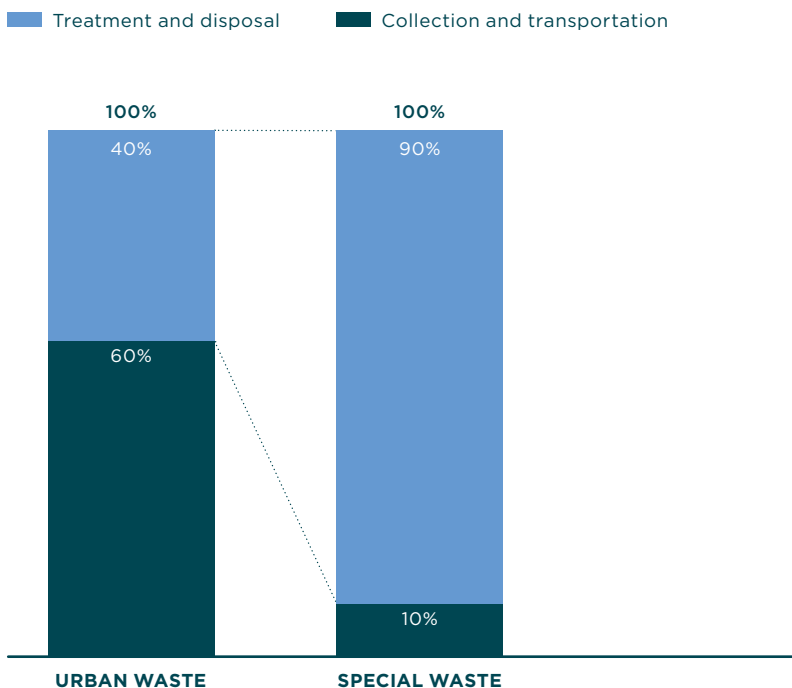
The whole management process is made by waste collection, selection/treatment and disposal. [see Exhibit 5]

- **Collection** is divided in two different types:
 - Undifferentiated, where waste is not sorted out
 - Differentiated, where waste is sorted out according to material categories (e.g. glass, paper, plastic and organic waste) in order to be recycled
- **Selection / treatment:** consists in preparing the collected waste to be recycled, recovered or disposed of. Depending on the collection type, two macro processes can be identified:
 - Differentiated waste is generally processed for recycling (or for composting when it comes to organic waste)
 - Undifferentiated waste can be sorted out during post-collection and partially redirected to the recycling process, or even be directly “burnt” for energy recovery in WTE plants
- **Disposal:** all leftovers from previous treatments (e.g. ashes from incineration in WTE) and waste that cannot be treated in any other way are permanently stored in landfills.

EXHIBIT 6

The collection phase weighs ~60% on total urban waste management value and only ~10% on special waste.

Average price of end-to-end handling, Italian market, 2015, %.



Source: ISPRA, VP analysis.

According to ISPRA (National Italian body for the scientific research on the environment) and from Value Partners expertise in the field, the “value content” along the value chain varies depending on the waste type.

The collection phase weighs ~60% on total urban waste management value and only ~10% on special waste. This is easily explained by the waste characteristics and the related collection methods (e.g. for special waste: lower volumes per weight unit, lower collection frequency, less geographical dispersion) [see Exhibit 6].

EXHIBIT 7

The Italian waste management industry is fragmented and characterised by the presence of different types of players.






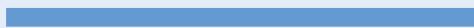


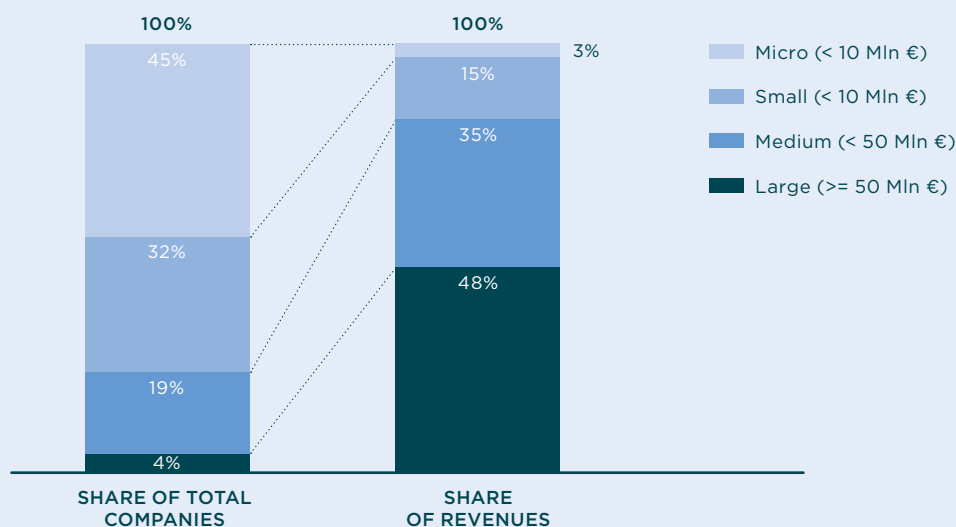
	BUSINESS MODEL	EXAMPLES	COLLECTION	SELECTION & TREATMENT	DISPOSAL	COMMENTS
UTILITIES	• Major multi-regional multi-utility companies (4 main players)					• Focus on urban waste • Presence in the special waste business through dedicated units
	• Regional or local utilities (various thousands)					• Focus on urban waste and collection activities. More limited presence in the other segments of the value chain
WASTE	• Multi-regional integrated players (about 20 players usually privately owned)					• Focus on the special waste business. Leverage of the presence across the whole value chain
	• Specialized players (>1000 players usually privately owned)					• Often specialized not only in terms of segment but also waste type . Sometimes coordinated by system integrators to offer an end-to-end service

EXHIBIT 8

Large companies account for ~4% of players and half of total revenues.

2014, Distribution of players by size (yearly revenues), %



Source: Cassa Depositi e Prestiti "Rifiuti" Waste industry study, Companies' websites, VP Analysis.

Competitive arena

The Italian waste management industry is still quite fragmented and characterized by the presence of different types of operators such as major multi-regional multi-utility companies (e.g. Hera), regional/local utilities, multi-regional integrated players and specialized players [see Exhibit 7].

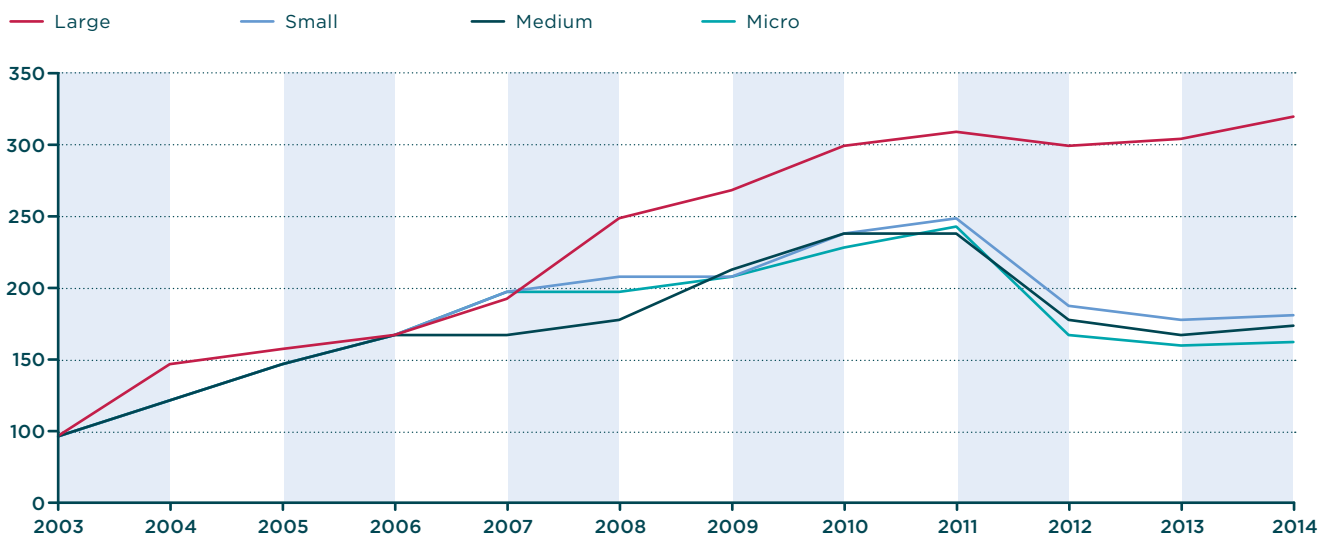
In Italy ~5000 companies are authorized to collect and manage waste, but the large ones (~5%) account for ~50% of the revenues produced across the entire sector [see Exhibit 8].

Moreover, large companies seem to better perform regardless of market conditions: they have been steadily growing at a faster speed than smaller ones and they have showed rather stable revenues when the market plummeted [see Exhibit 9].

From a geographical standpoint, every player is focused on working with local waste to minimize logistic costs. In fact, it is actually very unlikely for any player to penetrate remote areas, far from their local area of market influence and economic advantage.

EXHIBIT 9

Large companies show a stronger resilience to market shocks, fully exploiting times of growth and containing damages in moments of crisis.
Average revenues by company size, base 2003 (=100).



Source: Cassa Depositi e Prestiti "Rifiuti" Waste industry study, VP Analysis.

EXHIBIT 10

In Italy, it is estimated that a ~1% variation in household consumption corresponds to a ~1,2% variation in urban waste volumes.

Linear regression on log values, 2006-2014.

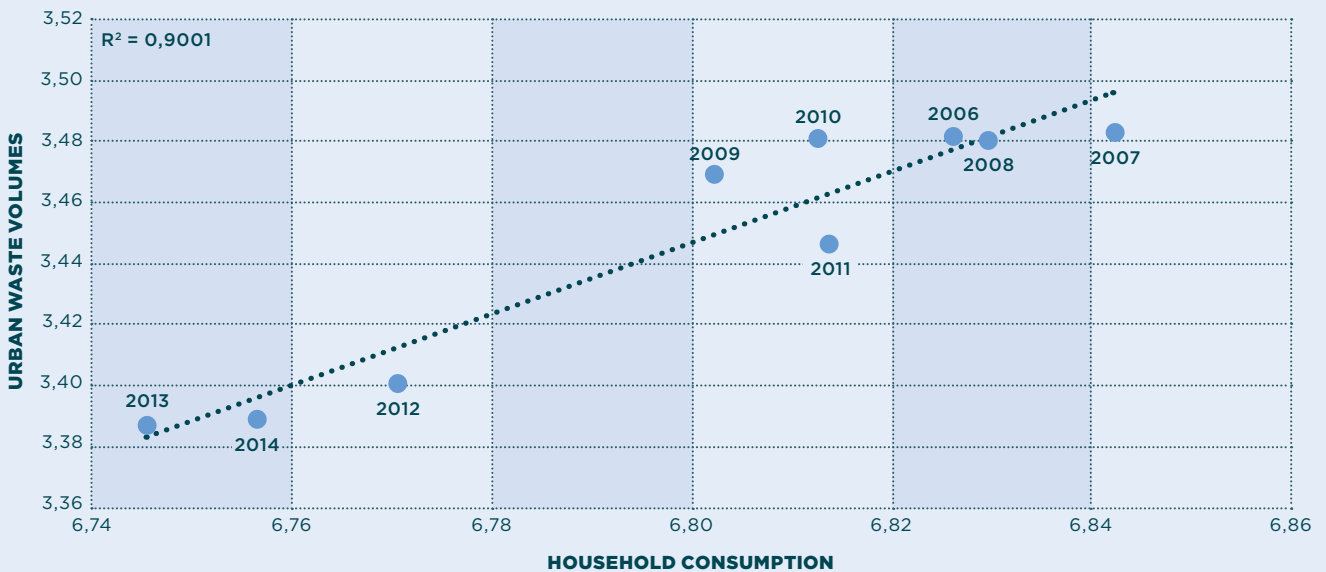
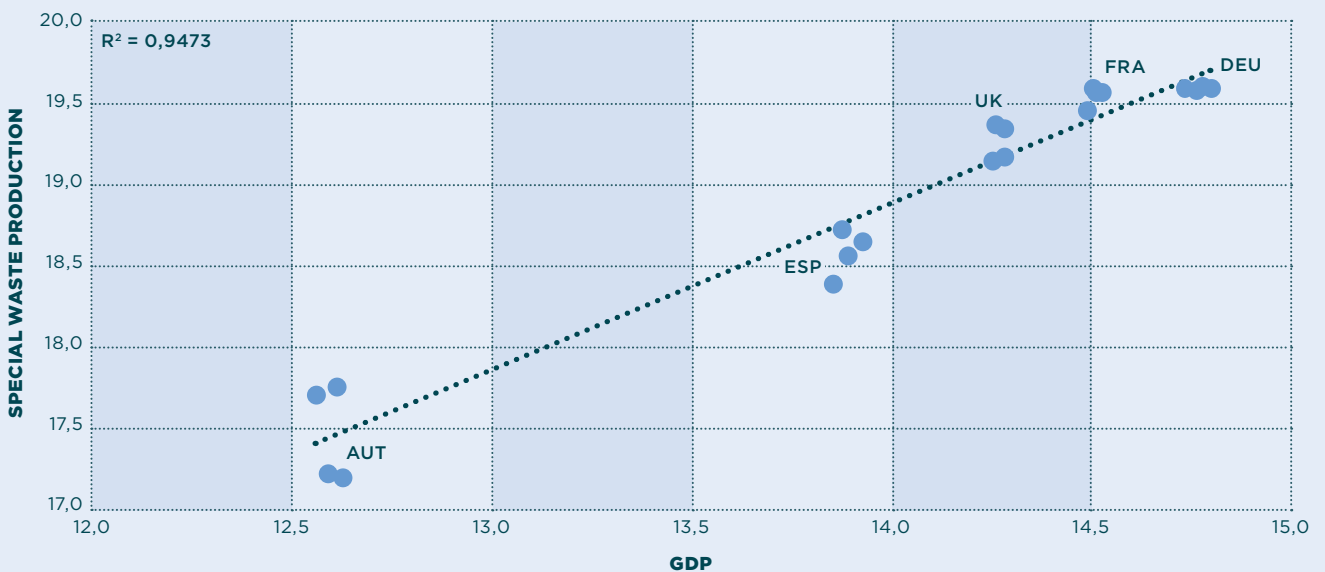


EXHIBIT 11

By looking at a sample of 5 European countries, it is estimated that a 1% GDP variation is matched by a ~1.03% variation in special waste production.

Linear regression on log values, 2006, 2008, 2010, 2012, Germany, UK, Spain, France, Austria.



Note: the coefficient of the regression line is to be intended as the percentage variation of the dependent variable following a 1% variation of the independent variable.

Source: VP Analysis.

WHAT DRIVES THE BUSINESS (AKA: WHAT PUSHES WASTE AROUND)

(1) Programma Nazionale
di Prevenzione dei Rifiuti.

The new secular trend: the decoupling effect

Historically, waste production has always been closely related to the overall macro-economic growth of a given Country, based on the fact that the consumption of goods, as well as their manufacture, necessarily entails the production of waste and garbage in a basically one-to-one proportion.

Consistently, empirical evidence shows a linear relationship between urban waste production and real household consumption in most developed/mature economies up to 2014.

Following a simple linear regression (with no purpose of explanatory modeling) it is estimated that a 1% variation in household consumption corresponds to a -1.2% variation in urban waste volumes [see Exhibit 10]

More difficulties arise when it comes to testing the relationship between special waste volumes and the level of production activity, due to a “bias effect” generated in the numbers by the progressive uncovering of substantial quantities of illegally-disposed waste.

Nonetheless, the analysis carried out on a sample of cross-section data relating to a selection of 5 European countries not affected by a similar occurrence confirms the expected linear relationship between special waste production and real GDP trends.

In particular, it is estimated that a 1% GDP variation in Europe is matched by a -1.03% variation in special waste production [see Exhibit 11].

However this simple, straightforward pattern will likely not any longer hold true in the future. Following to the Ministerial Decree n. 10/2013 by the Italian Ministry for the Environment and the Conservation of Land and Sea, the National Plan for Waste Prevention (1) introduces the objective of progressively decoupling waste production and economic growth, strongly fostering the promotion of environmental sustainability and green practices.

The main measures adopted with this act include: the modification of product design and production technologies to achieve production sustainability; “green procedures” in Public Administrations’ procurement; campaigns supporting the re-use of products and raising citizens’ awareness on environmental sustainability through an ad-hoc portal; creation of a set of fiscal and legal tools, such as incentives for R&D and for efficient production processes, virtuous taxation systems, the extension of legal responsibility for waste mismanagement to the producer.

The key parameter selected to evaluate the effectiveness of these public measures is the ratio between waste production and pro capita GDP, which is also used by the regulator to set future targets: a 5% reduction of urban waste and non-hazardous special waste between 2010 and 2020, combined with a more severe 10% reduction of hazardous special waste.

Recent years have been characterized by a steady decrease in urban waste, bearing witness to the increased awareness on green issues.

Conversely, special waste production has declined by less than the GDP, which has led to an increased ratio, despite a slight recovery between 2013 and 2015 [see Exhibit 12].

The aforementioned measures will most likely lead to a progressive untying of waste production from economic expansion, with an increasing curb of waste volume growth in the long run [see Exhibit 13].

EXHIBIT 12

In the recent years, Italian urban waste production has steadily decreased while special waste has declined by less than the GDP, leading to an increased ratio.

Waste production/GDP in Italy, ton/M€.

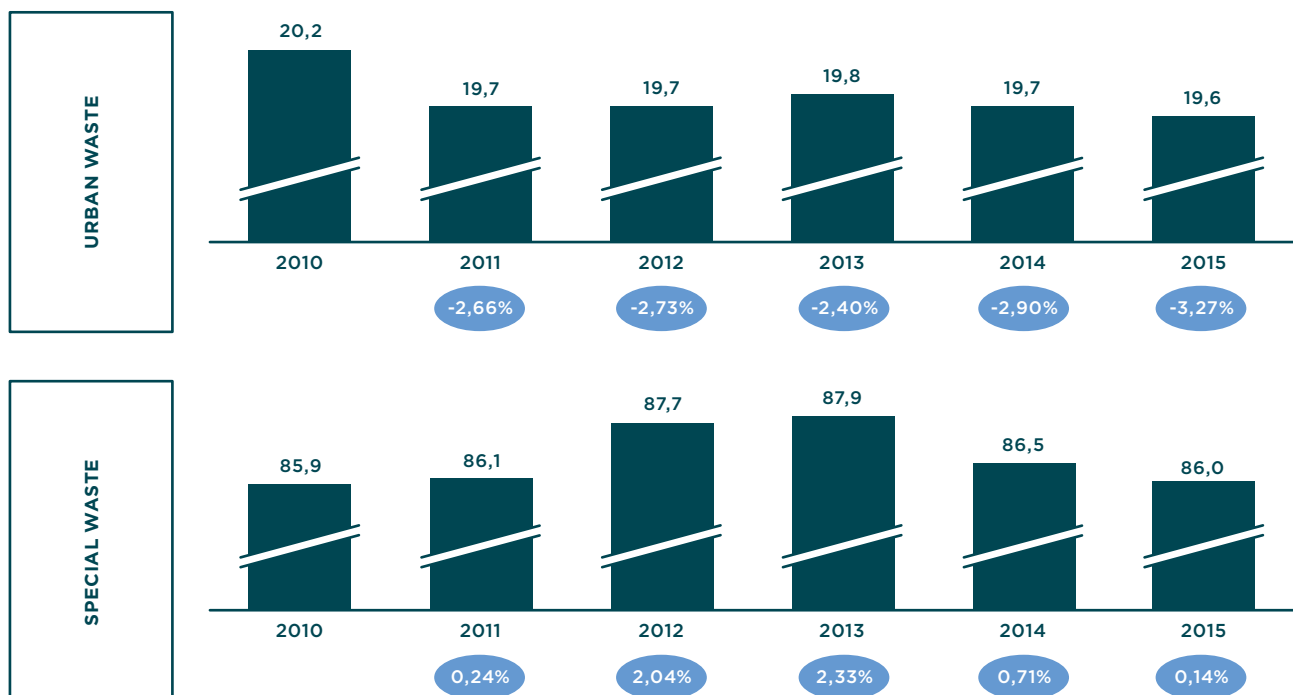


EXHIBIT 13

Unlike Italy, Europe has been focusing for years on “decoupling” growth waste volumes from GDP increase, in order to promote more sustainable habits in waste production.

Urban waste production and GDP per capita, Kg, '000 Euro.

◆ GDP per capita ● Urban waste per capita

EUROPE



ITALY



Source: Eurostat, ISPRA, VP analysis.

“You shall not dispose anymore”

In addition to waste production control, the regulatory effort also thoroughly addresses waste management.

Specific attention is devoted to the collection mix, as it represents a key driver and an enabling factor to increase the recycling ratio; the European directives adopted by the Italian legislation set progressive goals for the differentiated collection quota, that go from 50% in 2020, to 65% in 2030.

Municipalities operate autonomously to comply to the regulations, mostly by setting up solutions for door-to-door collection, or tax policies that reward virtuous behaviours.

With regard to waste treatment per se, Community regulation provides a hierarchy of preferable solutions, from best to worst: preparation for re-use, recycling, recovery (e.g. WTE) and disposal.

Solutions at the top of the pyramid are incentivized through fiscal policies that reduce indirect taxation on recycled products, provide tax credit for investments in recycling or recovery facilities, while more heavily burdening less-preferred treatments such as landfills. Moreover, a binding target of maximum 10% is established as the quota of urban waste that can be disposed of in landfills by 2030.

Unlike waste production, public authorities heavily rely on the increasing environmental commitment of the population to reach waste management regulatory targets.

The shift represents an opportunity for waste-treatment industry players, as the solutions favoured by the regulator also require more complex and costly handling, and offer revenues from the sale of the resulting output (e.g. recycled materials, compost, energy).

In other words, the regulatory action, together with the population's environmental concerns, will determine a decrease in waste volumes and, at the same time, a conversion towards higher value-adding treatments.

(2) Weighted Average Cost of Capital.

(3) Regulatory Asset Base.

Urban waste pricing: finally making it attractive for investors

As mentioned, the urban and special waste market follow different logics in the definition of price. For what concerns urban waste pricing, the comparison with other Italian utilities regulatory pricing frameworks is necessary to understand possible evolution trends.

In Italy, the regulator's aim is clearly to promote efficiency also in the waste market, since it is in the common interest of both citizens and the public administration to lower the costs of urban waste management and consequently to be able to lessen taxation.

This tendency is confirmed by similar regulatory pricing frameworks at electricity/gas utilities. Moreover, increasing attention to green issues and EU recycling targets require investments to generate technological and service improvements along the whole value chain.

To meet all these requirements, the regulator will likely introduce pricing policies that have already proven successful in the utilities sector such as: a "predetermined" WACC (2) remuneration on RAB (3), price capping and incentives for improving service level.

In this way, players will likely experience the following benefits:

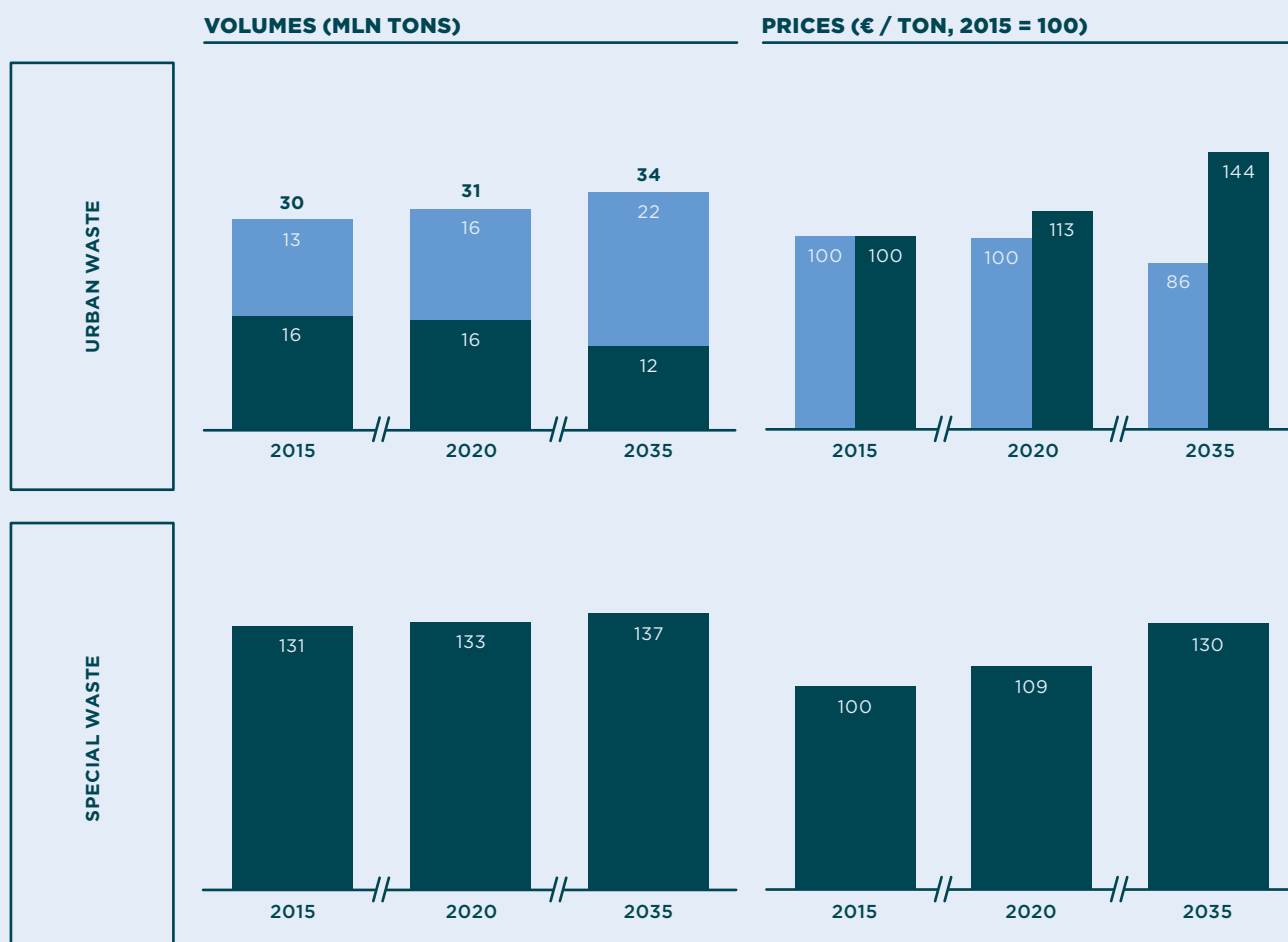
- Increased rate of return on capital investments
- Inclusion of items previously not considered in RAB-based remuneration
- Predictable pricing mechanisms established by the regulator enabling higher stability regardless of market volumes

Since the special waste market is subject to free market logics, its pricing dynamics are simply driven by market supply and demand. For this reason, pricing follows volume trends.

EXHIBIT 14

Volumes are expected to increase due to a rebound in consumption, while price evolution is driven by the expected increase of the rate of return.

■ Differentiated ■ Undifferentiated



HOW THE WASTE MARKET WILL LIKELY EVOLVE

All in all, the most likely scenario will be characterized by an Italian economy rebound, a favourable pricing framework evolution and effective waste control policies. More precisely, we assume that:

- Italy will see a positive economic recovery, following 2016 encouraging signals, in line with the average estimate of leading analysts (e.g. IMF, Prometeia, ECB, United Nations, European Commission)
- Environmental awareness will further improve with the diffusion of “green” business practices and with the evolution of the national environmental regulation, in line with recent developments (achievement of European targets for differentiated waste quota and for waste / GDP ratio reduction)
- Full take-up and application of the new pricing scheme for urban waste, with a slight increase in risk premium for capital remuneration already in the medium term and a switch to utility-like pricing logics in the long term.

Volumes and prices evolution: our view

Both urban and special volumes are expected to increase due to a rebound in consumption, although limited by the implementation of waste control policies defined by the Regulator in order to achieve the targets defined in 2013 for 2020 (i.e. “decoupling” waste production from GDP: waste volumes / GDP ratio -5% vs. 2010) [see Exhibit 14].

The effect of this containment is amplified in the long run, with the aim to match the best-in-class performance of other EU countries, and to further mitigate the upward effect on volumes due to the economic rebound.

In urban waste only, trends in differentiated / undifferentiated volumes are linked to the evolution of collection criteria to be locally deployed by each municipality to successfully reach EU targets.

Price evolution will be characterized by the expected increase of the rate of return (RoR) mainly due to the application of the new price regulation scheme [see Exhibit 14 at page 20]. Let's also remember that a decrease in waste volumes will positively affect price per ton due to the increased "weight" of (remunerated) fixed costs.

Therefore, in a scenario of stable revenues and incentives:

- Undifferentiated waste prices will grow as an effect of:
 - The increased rate of return on capital investments
 - The increased weight of fixed costs per ton on declining volumes
- On the other hand, differentiated waste prices will remain stable in the short term due to:
 - The lower weight of fixed costs per ton on growing volumes...
 - ... counterbalanced by the increased rate of return on capital investments

As for special waste, in a free-market environment a price level recovery is expected, progressively heading towards "historical equilibrium prices" (i.e. 2009÷2011 period).

The future is already here: Germany as the European best in class

Today, Germany can be safely taken as a best-case example for waste management practices, in terms of efficiency and environmental sustainability.

Its remarkable achievements stem from a close cooperation between the industrial and political systems, and the adoption of a long-term vision, resulting in several measures that can be summarized in two major lines of action:

- Reduction of per capita waste production, thanks to production and consumption patterns that effectively achieve the decoupling of waste production from economic growth
- A shift in the perception of waste from useless material to be disposed of to a profit opportunity arising from re-use, recycling or recovery

Germany was indeed able to anticipate and direct EU waste management guidelines, establishing the model to follow. Noteworthy applications of the new strategy are the early adoption of the principle of legal accountability of the producer for waste management and of strict limits to disposal, proving them as key success factors driving the growth of re-use and recycle.

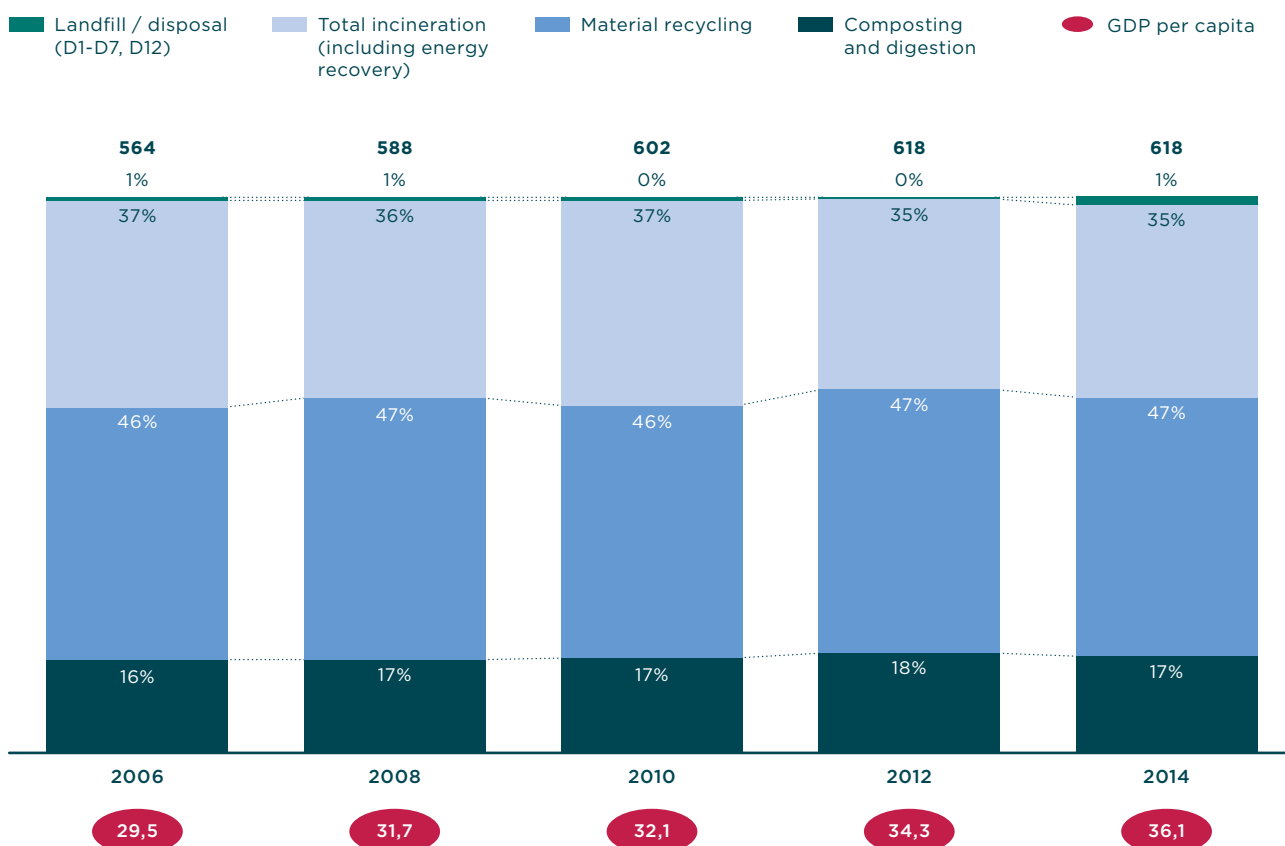
As a consequence of careful management of the waste cycle, Germany was able to reach the “zero-landfill” goal as early as in 2006 [see Exhibit 15].

Given the results achieved by Germany and the strong influence it displayed in shaping Community policies and in extending its practices to the other Member States, it is reasonable to expect that waste legislation in the EU will evolve in the direction of further reinforcing the key aspects of the German model.

This brings to the likely conclusion that also the Italian waste sector will progressively conform to this framework, reaching in the long run a treatment mix similar to that of Germany.

EXHIBIT 15





Germany was able to reach the zero-landfill goal already in 2006.
Waste volumes and GDP per capita, Kg, ‘000 Euro.



Source: Eurostat, VP analysis.

EXHIBIT 16

Multi-regional players will benefit from the expected evolution of the waste market and will start to consolidate the sector.

TYPE OF PLAYER	POSSIBILITY TO BENEFIT FROM THE FUTURE SCENARIO	RATIONALE	EXPECTED NEXT STEPS IN THE COMPETITIVE LANDSCAPE
MULTI-REGIONAL MULTI-UTILITIES		<ul style="list-style-type: none"> • Synergies between waste and energy production • Synergies between urban and special waste management • Strong logistics presence in wide areas 	Buy local players to expand span of control (both urban and special waste operators)
MULTI-REGIONAL WASTE ONLY		<ul style="list-style-type: none"> • Leverage special waste management know-how • Strong logistics presence in wide areas • Strong relations with main industrial groups • Special waste volumes will actually remain 4x urban waste 	Buy local special waste operators to expand span of control
REGIONAL/ LOCAL MULTI-UTILITIES		<ul style="list-style-type: none"> • Can only leverage the consolidated relationship with local municipalities in waste collection 	Be bought by multi-regional multi-utilities
SPECIALIZED WASTE PLAYER		<ul style="list-style-type: none"> • Player specialised in a particular type of waste management. It could benefit from the increasing focus on treating particular types of waste (mainly dangerous areas) 	<ul style="list-style-type: none"> • Be bought by multi-regional players • Possible creation of specialized treatment poles

CONCLUSIONS

In light of all the arguments exposed in this perspective, we believe that the waste market is becoming more attractive than in the past thanks to several aspects such as:

- More certainties about volume flow planning and expectations about revenues and margins due to the new urban waste regulation framework
- Leverage on mid-term volumes rebound...
- ...and increasing focus on value-adding recycling services
- Synergies between waste treatment and energy production

On the basis of what has come to light, the typical waste sector players could differently benefit from the expected evolution of the business.

As reported in [Exhibit 16](#), multi-regional multi-utilities players (e.g. A2A, IREN, HERA, ACEA) and multi-regional waste-only players will likely benefit the most. In fact, the first can leverage on synergies between end-to-end waste management and energy production, and between urban and special waste treatment plants/methodologies, the latter from special waste management know-how and strong relationships with main industrial groups.

Moreover, their presence on wide consistent areas give them competitive advantage in logistics activities.

On the other hand, specialised waste players and local multi-utilities are expected to be consolidated within multi-regional players, starting a waste market consolidation trend. In this future landscape, private financial investors can consider multi-regional players as potential targets where to invest in a profitable way.

AUTHORS



ALBERTO CALVO

Partner, Milan Office

alberto.calvo@valuepartners.com



LORENZO PRIVITERA

Engagement Manager, Milan Office

lorenzo.privitera@valuepartners.com

The regulatory action, together with the population's environmental concerns, will determine a decrease in waste volumes and, at the same time, a conversion towards higher value-adding treatments.

ABOUT VALUE PARTNERS

Value Partners, founded in Milan in 1993, is a fast-growing global management consulting firm that works with multinational corporations.

Value Partners Management Consulting draws on 150 professionals from over 20 different nationalities, guided by a well-knit team of partners, including the company's founders.

It has offices in Milan, London, Istanbul, Dubai, São Paulo, Buenos Aires, Beijing, Shanghai, Hong Kong and Singapore.

Value Partners can rely on systematic methodology and professional tools combined with a wealth of industry knowledge.

Its project execution and delivery capabilities in the telecom, media, financial services, energy, manufacturing and high tech fields are outstanding.

The company has extensive know-how in assisting financial investors in both advanced economies and emerging markets, and has advised PE firms on acquisitions for over 10 bln €.

For more informations on the issues raised in this note please contact the authors.

Find all the contact details on valuepartners.com

Milan
London
Istanbul
Dubai
São Paulo
Buenos Aires
Beijing
Shanghai
Hong Kong
Singapore