TELECOMMUNICATIONS, MEDIA AND TECHNOLOGY

Q4 2016

ALVAREZ & MARSAL

TELECOM

Q4 2016 saw some very large acquisitions in Europe and North America:

- The proposed acquisition of media giant Time Warner by leading U.S. telecom operator AT&T was the main deal of the quarter. Valuing Time Warner at $109billion, it is the largest acquisition involving a major media and a telecom/cable company since the 2011/2013 acquisition of NBCUniversal by cable operator Comcast.
- T-Mobile NL acquired the fixed assets from Vodafone NL (Vodafone Thuis). This gives T-Mobile NL (until then a mostly mobile operator) 150,000 fixed customers – most of which have a triple play service (TV, fixed telephony and internet services).
- Russia's leading mobile telecommunication operator MegaFon acquired a controlling stake in Mail.ru, a leader in the provision of e-mail services as well as the owner of one of Russia's largest internet portals, three Russian social networks and Russia's largest online game business for $740million.
- Telenet Group acquired SFR Belgium and Luxembourg (SFR Belux) from Altice for an enterprise value of €400million.

A&M VIEW

TELECOM M&A IS DRIVEN BY THE NEED TO DIFFERENTIATE

The telecom deals of the quarter illustrate the approach telecom operators use for differentiation:

- **Quadruple play:** The Vodafone/Liberty global merger in the Netherlands gave birth to a strong multi-play operator capitalising on the strengths of Liberty's cable network and Vodafone's mobile network. T-Mobile NL responded by acquiring the fixed assets that Vodafone had to sell (because of regulatory demand) to become a full quad-play operator as well. Telenet acquisition of SFR Belux also aimed at reinforcing its converged services.
- **Differentiation through content:** Unique access to content makes TV services (a key component of telecom operators' triple play and quadruple play) more attractive. The rationale behind AT&T proposed acquisition of Time Warner is to have unique access to high value content created by HBO (Game of Thrones), CNN, Warner Bros. (Harry Potter, Fantastic. Beasts, etc.). This was the same logic that guided the Comcast acquisition of NBCU in 2011. That merger proved very successful, especially for sports as NBCU broadcasted most of the recent Olympics. The convergence between Telecom and Media that was heavily discussed at the turn of the century is back on to center stage.
- **Digital services:** MegaFon acquisition of Mail. ru aims at enriching their online services offering for its mobile customers. As 4G and smartphones become ubiquitous (see chart in appendix), content and digital services become a key part of mobile users time. Offering great digital services as Mail.ru is, becomes both a major differentiator for MegaFon and a way to increase average revenue per user (ARPU) for its 77million subscribers.

THE VIEW FROM NORTH AMERICA

There were 23 telecom transactions in North America in the fourth quarter, an 8.0% decrease versus the same quarter last year. This decline was offset by a strong first and third quarter, which drove the total 2016 deal count to 96, up 5.5% from 2015. Despite being down on a volume basis in the fourth quarter, CenturyLink announced its $34 billion acquisition of Level 3 Communications in October, which was the largest telecom deal of year. In addition, Equinix announced the acquisition of 24 datacenters from Verizon for $3.6 billion and Global Secure Infrastructure announced the acquisition of 57 datacenters from a consortium including Catbird Networks, Cryptzone and Easy Solutions for $2.8 billion, driving fourth quarter to be the highest on a dollar value basis. In addition, similar to the third quarter, we continue to see the activity in the mobile, network and cable equipment space, which drove approximately a third of the deal volume in 2016. The biggest story about telecom, however, isn't in telecom. The lines are getting ever so grey with Media M&A (see our Media cover on page 4).

We expect telecom M&A to remain strong in 2017 as private equity firms continue to drive consolidation and publicly traded telecom companies continue to acquire their way into new technologies and markets.

MEDIA

The Media sector led TMT M&A activity in Q4 2016 with some of the largest deals of the year happening in December.

- The proposed $109 billion Time Warner acquisition by AT&T is likely to be the major media deal of the year.
- Also in December, U.S. major media group 21st Century Fox offered to buy the 61% of Sky (UK) it did not own, valuing the company at £18.5 billion. This bid was seen as amicable and was well received by Sky shareholders. The deal includes Sky Germany, Austria and Italy that were acquired by Sky U.K. in 2014, creating a transatlantic pay TV group.
- At the same time, French media group Vivendi (owner of pay TV operator Canal+) has started buying shares into leading Italian pay-TV and broadcaster Mediaset. As of the end of December it had purchased around 30% of Mediaset capital. This was not perceived as friendly by Mediaset's major shareholder Fininvest, laying the ground for a potentially conflictual Q1 2017. Vivendi has also acquired a controlling stake in Telecom Italia, Italy's main telecom operator.

A&M VIEW

NETFLIX, AMAZON VS. PAY TV

Large media groups have been witnessing the progress of Netflix with worry. The falling number of pay-TV customers in the U.S. (see appendix) did not help soothe their worry.

- The battle became global as Netflix announced an (almost) global coverage in January 2016.
- Amazon Prime video service followed suit in December 2016, covering more than 190 countries and territories.
- Pay-TV operators response of international M&A (Vivendi, 21st Century Fox) can be very much seen as a response to Netflix and Amazon allowing them to leverage content in more than one territory as well as getting scale for everything from set-top boxes to call centre.

CONVERGENCE, CONVERGENCE, CONVERGENCE

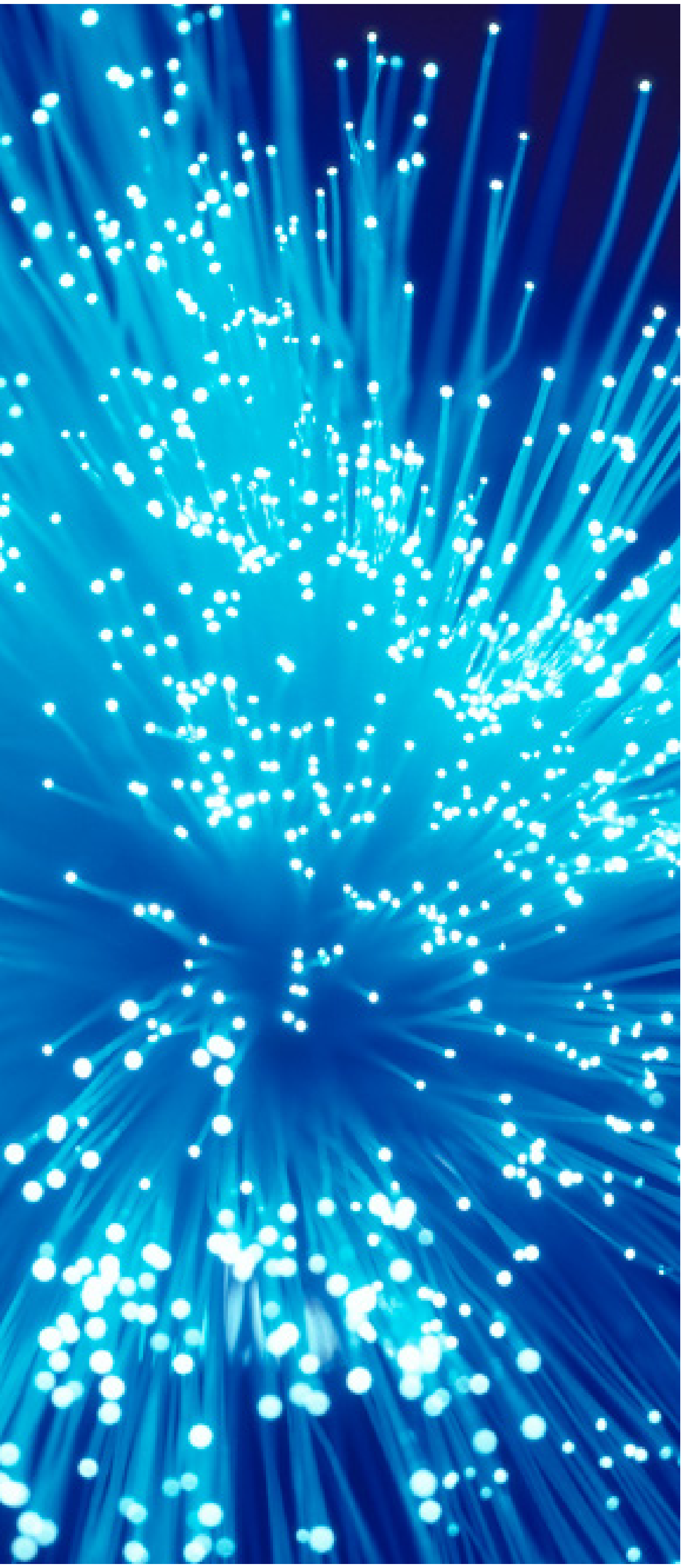
Driven by consumer demand for triple-play and quad-play services (fixed phone, pay-TV, internet access and mobile), pay-TV operators joined forces with telecom operators. The AT&T acquisition of Time Warner can be seen in that light.

It is also worth noting that Sky launched their MVNO (mobile virtual network operator) service in the U.K. in Q4 2016 hence offering a full quad-play service.

THE VIEW FROM NORTH AMERICA

There were 41 media transactions in North America in the fourth quarter, a decrease of 26.8% versus same quarter last year. The decline drove 2016 transaction volume to be 197, 3.4% less than 2015. The fourth quarter, however, will not be remembered for its decline in volume. Instead, it will be defined by AT&T's proposed acquisition of Time Warner for $105 billion, one of the largest media deals ever. This is the third telecom provider to expand into the media space, following Comcast's acquisition of NBC in 2011 and Verizon's acquisition of AOL in 2015 and pending acquisition of Yahoo. We don't expect it to be the last. We believe acquisitions such as these will continue as traditional telecom providers fight to stay relevant in the world of Google, Facebook, Amazon and Netflix. It is hard to say if they will continue at this scale though. On the day the Time Warner deal was announced, President-Elect Trump publicly announced he was against it, stating "It's too much concentration of power in the hands of too few". Based on Mr. Trump's rhetoric, such deals may be harder than they once were, especially if they eliminate American jobs in the name of "synergies".

We expect media M&A transaction volume to accelerate in 2017 as other telecoms strive to stay competitive in the digital economy.



TECHNOLOGY

M&A activity illustrate some of the Tech industry's most dynamic segments:

- Wearables: leading fitness tracker manufacturer Fitbit acquisition of the assets of smartwatch maker Pebble.
- Advertising and TV: with Nielsen's acquisition of Gracenote (a leading metadata provider for music and video) from Tribune for $560 million.
- Webhosting: Warburg Pincus and Go Dadddy re-draw the European map.
  - Warburg Pincus taking a minority interest in 1&1 Internet SE (Europe's web hosting leader). It is a sector Warburg Pincus are familiar with as they own the U.S.'s second largest provider, Endurance.
  - Go-Daddy purchasing Host Europe Group from Cinven in early December.
  - Warburg Pincus and 1&1 Internet SE jointly buying Strato in mid-December 2016.

A&M VIEW

STRUGGLE AHEAD FOR SMARTWATCH MAKERS?

In a December report, IDC mentioned that the wearable market as a whole was growing, driven by basic fitness trackers, while at the same time smartwatches were struggling to find their market. The acquisition of smartwatch maker Pebble by leading fitness tracker manufacturer Fitbit is a reflection of the situation of the market. Despite being a Kickstarter success, Pebble was financially struggling; it reached an agreement to sell its key assets to Fitbit in early December. Fitbit plans to use the acquisition to improve the software platform used across all its devices.

METADATA IS DRIVING THE FUTURE OF DIGITAL ADVERTISING

The combined digital advertising spend on desktop and mobile was at par with TV spend in 2016 according to Zenith Optimedia. As a result Nielsen and other rating businesses are working to improve their viewing measurement to better include online data. Metadata (e.g. the information describing a TV show such as its name, duration, key actors, genre, synopsis, etc.) is becoming a key tool to understand user viewing habits and build better user profiles, in addition to information collected on TV viewers.

WEBHOSTING: THE END OF FAST GROWTH?

As the major markets in Western Europe (Germany, UK, France) become well penetrated and growth slows down to single digit, the web hosting market consolidation is accelerating around players with continental/global foot print (1&1, Go Daddy). The major European markets are catching up with the U.S. market already consolidated around several large hosters (Go Daddy, Endurance).

THE VIEW FROM NORTH AMERICA

There were 199 technology transactions in the fourth quarter, which was largely in line with the same quarter last year. Full year 2016 technology M&A was also on par with prior year, accounting for 908 transactions, which was 2.0% higher than 2015. The four largest transactions in the fourth quarter were Elliott Management's sale of Mentor Graphics to Siemens for $4.0 billion, Thoma Bravo's sale of Deltek to Roper Technologies for $2.8 billion, Golden Gate Capital's take private acquisition of NeuStar for $2.7 billion, and Bressemer Ventures sale of LifeLock to Symantec for $2.1 billion. As with the rest of 2016, fourth quarter volume was largely driven by private equity through their execution roll-up strategies and exits of previous investments via IPO or a sale to a public company.

We expect these trends to continue in 2017. There is arguably more money than ever available for acquisitions: private equity dry powder is at an all-time high, public company balance sheets are stronger than ever with the surging public equities market, debt remains relatively cheap compared to historical levels, and foreign entities are entering the space at a never seen before level, for example Softbank's $100 billion tech fund. This unprecedented level of availability will drive up demand and multiples, creating a very attractive exit market for current private equity tech investments. In addition, activist investors have latched onto the space, driving underperforming companies to look into strategic alternatives much quicker than they otherwise would have. We do not believe the looming uncertainty of the Trump administration's populism policies, or rising interest rates will do much to slow down these trends.

ABOUT ALVAREZ & MARSAL

In the current technology, media and telecommunications (TMT) environment, many companies need the support of experienced professionals who can work alongside management to deliver solutions to complex problems.

Founded in 1983, Alvarez & Marsal is known for its distinctive restructuring heritage, hands-on approach and relentless focus on execution and results.

A&M works with clients across the TMT investment life-cycle in the following ways:

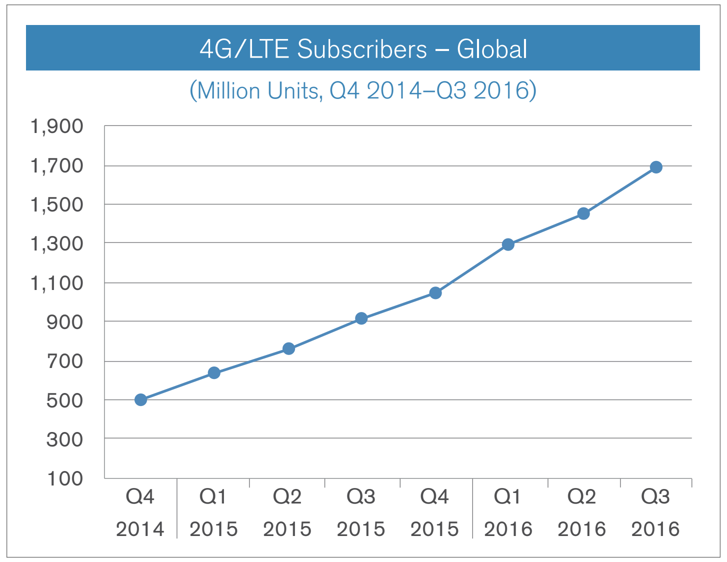
Assisting companies pursue acquisitions, mergers or divestitures with financial and operational due diligence, valuation, tax structuring and acquisition/carve-out integration planning and execution.

Working with management to grow revenue, optimise cost and CapEx, analyse asset performance and portfolio prioritisation, identify divestiture opportunities, and improve the company's planning and financial control processes and systems.

Support management, legal and financial advisors of distressed companies to stabilise operations and cash flow, thereby extending their "liquidity runway".

Providing interim management positions as appropriate.

TELECOM- MEDIA- TECHNOLOGY - A&M VIEW



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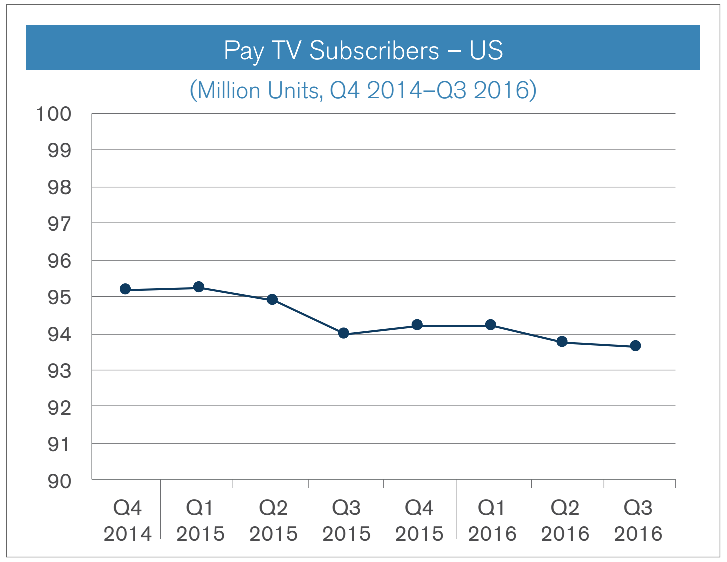
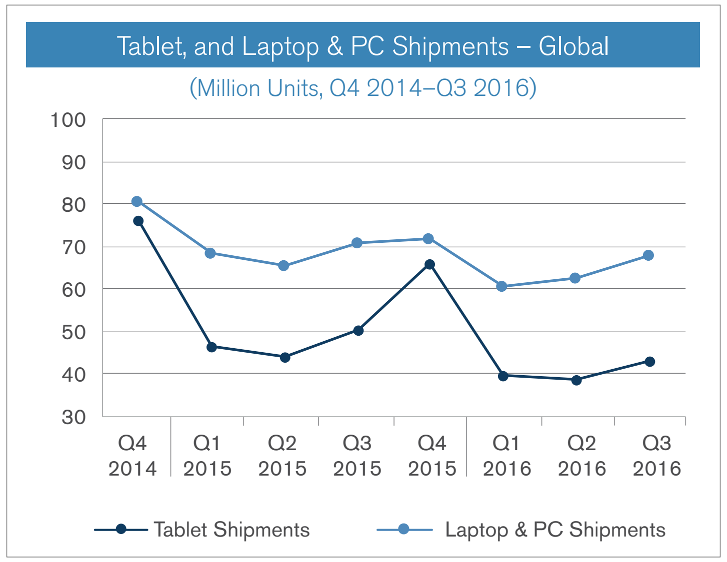
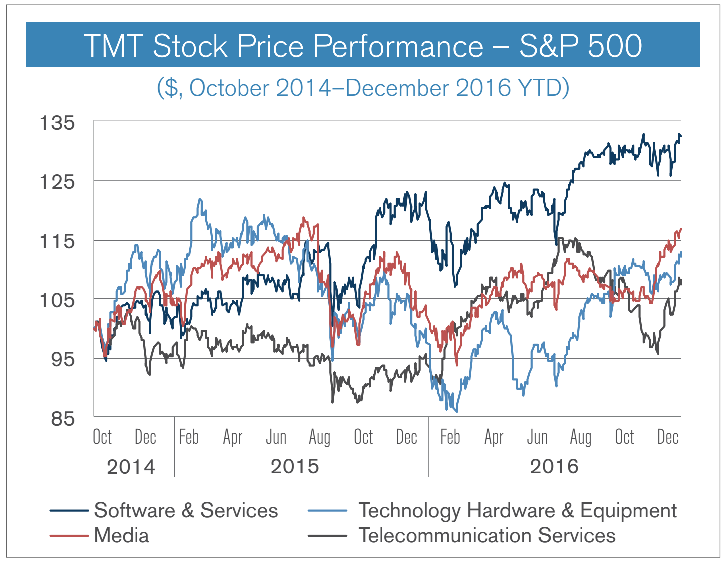


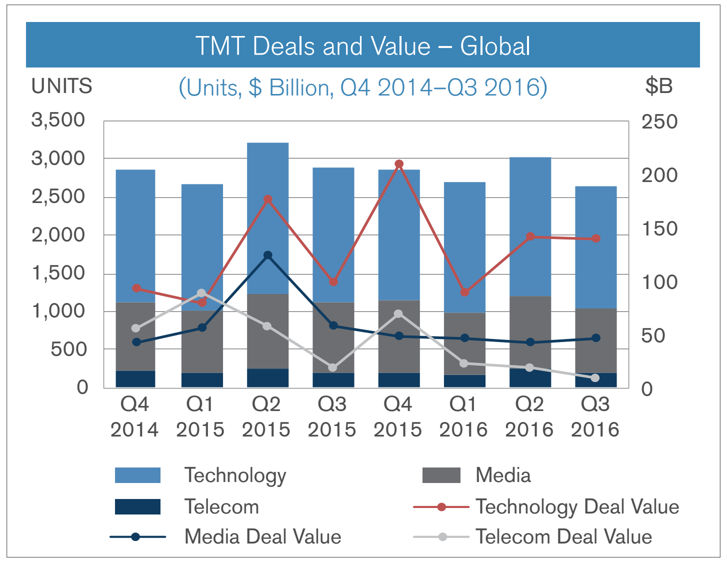
Source: Leichtman Research Group



Source: IDC



Source: IC Subscribed Database



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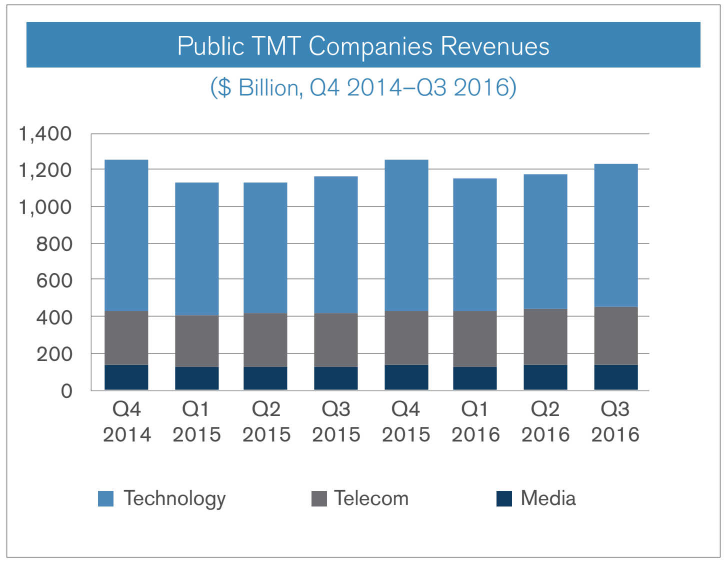

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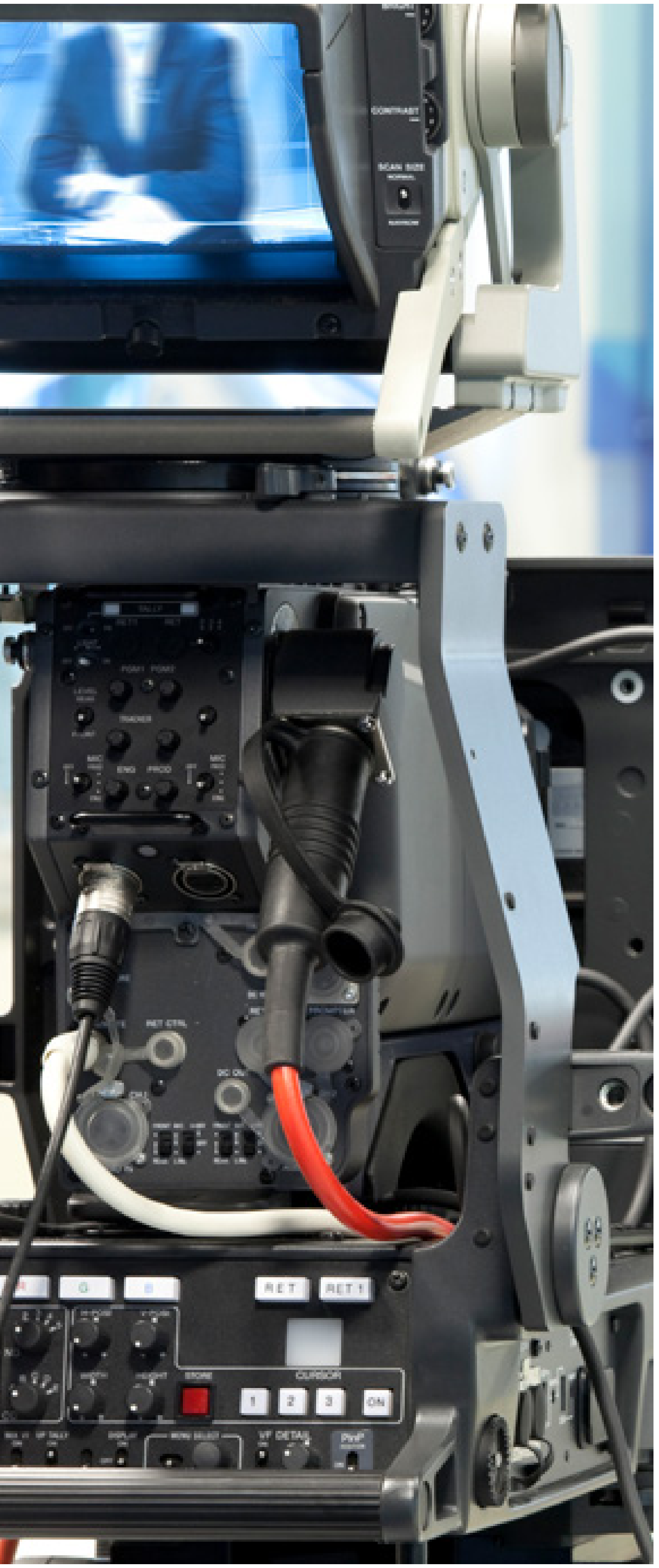

THE BUSINESS OF MEDIA

A&M's quarterly media breakfast series

Alvarez & Marsal and The Club at The Ivy invite you to join a discussion on "The Business of International Television" hosted by Paul Naha-Biswas, moderated by Kate Bulkley and with panelists from Endemol Shine, eOne, Netflix and Turner.

After years of gradual growth, OTT and on-demand services have moved to the mainstream with a now clear impact on linear viewing. When cinematic quality series such as *The Crown* and *The Man in The High Castle* can be accessed cheaply, instantly and on any device, what does the future hold for our international content creators and aggregators that were designed for a linear world?

With an eye firmly on the global market, we ask our panel how they adapt and flourish in the new business of international television.

Hosted by

Paul Naha-Biswas
Head of Media, Alvarez & Marsal

With a panel of

Wim Ponnet
Group Director of Strategy and Corporate Development, Endemol Shine Group

Stuart Baxter
President, eOne Television International

Chris Whiteley
VP of Business Development, Netflix EMEA

Jamie Friend
CFO, Turner EMEA

Moderated by

Kate Bulkley
media journalist and commentator

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To discuss how A&M might provide assistance with Transaction Services, Operational Performance Improvement, Restructuring or Interim Management please contact any of the following:

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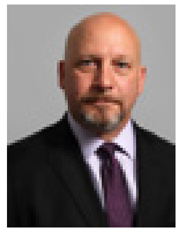

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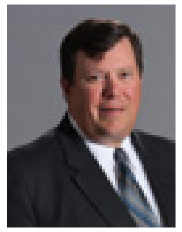

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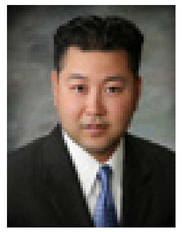

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LEADERSHIP
ACTION
RESULTS

Companies, investors and government entities around the world turn to Alvarez & Marsal (A&M) when conventional approaches are not enough to activate change and achieve results.

Privately-held since 1983, A&M is a leading global professional services firm that delivers performance improvement, turnaround management and business advisory services to organizations seeking to transform operations, catapult growth and accelerate results through decisive action. Our senior professionals are experienced operators, world-class consultants and industry veterans who draw upon the firm's restructuring heritage to help leaders turn change into a strategic business asset, manage risk and unlock value at every stage.

ALVAREZ & MARSAL