

Pyramid Research
Africa & Middle East
Telecom Insider

Pay-TV in Africa and the Middle East: Early-Stage Market Prepares for Expansion

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Highlights

Due to limited competition, the difficulty of obtaining content and the lack of an affordable mobile pay-TV platform, pay-TV markets in Africa and the Middle East are currently dominated by a small number of DTH operators.

In the longer term, growth will accelerate significantly as regulatory changes and rising incomes enable new pay-TV entrants to begin tapping the region's very underpenetrated pay-TV market.

Over the next five years, we expect these positive changes in the market environment to improve pay-TV subscription adoption rates in the region, leading to an overall CAGR of 13% through 2013 and a total of 27.5m subscriptions by year-end 2013. This means the pay-TV market in AME will enjoy the world's highest growth rate over the next five years.

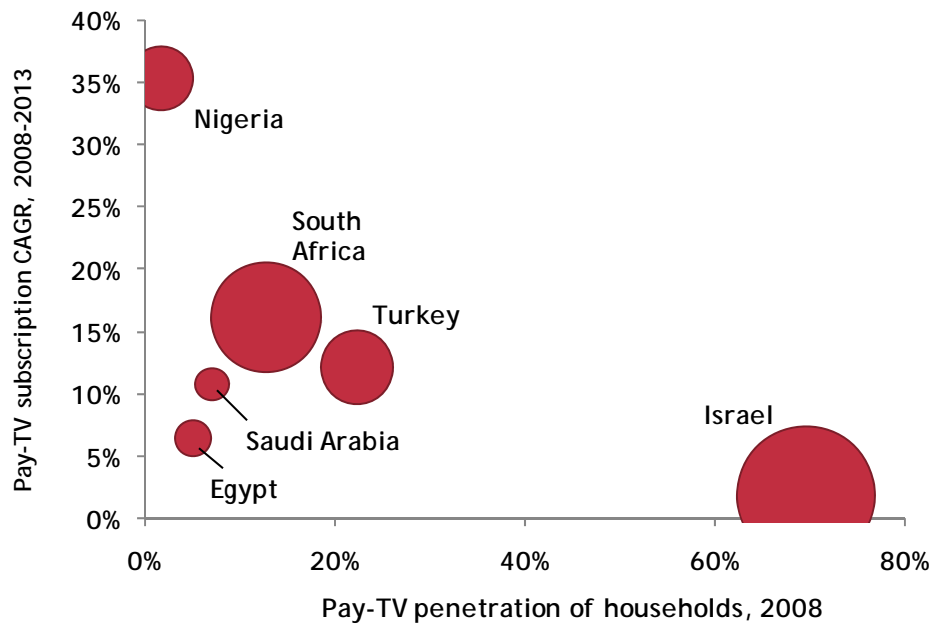
Although infrastructure shortcomings and limited content availability will continue to affect growth in the short term, we expect total regional pay-TV revenue to reach \$8bn by 2013, almost double 2008 levels.

Introduction

The pay-TV sector in Africa and the Middle East (AME) is still small, generating revenue of just US\$4.5bn in 2008, but it has great potential. In this region – in which we include Africa, the countries bordering the Persian Gulf, the Levant and Turkey – only 6% of households subscribe to pay-TV services, while 38% have televisions. Furthermore, while other emerging markets see up to 2% of GDP going to pay-TV and mobile video services, this ratio is only 0.12% in AME, indicating that the pay-TV market in this region remains underserved. Over the next five years, as regulatory changes introduce more competition into the sector and technology platforms advance, we expect the region to begin to overcome the many obstacles that have inhibited its growth in the past, specifically the high cost and limited reach of pay-TV platforms.

This report analyzes the growth potential for pay-TV services in AME, as well as the influence of current market conditions, new licensing regulations and new technologies. It highlights the main obstacles to pay-TV adoption in the region and points out the key market developments that would enable more aggressive growth than we are currently projecting. The report then looks in detail at three key pay-TV markets, which together account for roughly one-fourth of the AME opportunity, and efforts in them to overcome these obstacles: Nigeria, Saudi Arabia and South Africa. Thanks to rising incomes and greater competition in many markets, the pay-TV market in AME will enjoy the world's highest growth rate over the next five years, with subscriptions increasing at a CAGR of 13% and subscriptions reaching 27.5m by year-end 2013. Although infrastructure shortcomings and limited content availability will continue to affect growth in the short term, we expect total regional pay-TV revenue to reach \$8bn by 2013, almost double 2008 levels.

Exhibit 1: Pay-TV market size, penetration and growth rates for key markets



Note: Bubble size represents size of total market revenue in 2008

Source: Pyramid Research Media Forecasts, Q4 2008

Pay-TV's potential in Africa and the Middle East

A. Pay-TV in AME is hampered by insufficient competition, content and infrastructure

Due to limited competition, the difficulty of obtaining content and the lack of a mobile pay-TV platform that makes pay-TV affordable via the region's dominant last-mile technology, the pay-TV market in Africa and the Middle East is currently dominated by a small number of DTH operators. Several of these obstacles are interrelated: Lack of competition leads to tariffs that are higher than most households can afford, but it also gives the incumbents great market power and the financial resources to acquire premium content. New pay-TV entrants that would like to target a wider, less wealthy audience thus find it hard to acquire content that their potential audiences would find attractive and affordable. Exhibit 2 outlines the main challenges that historically have slowed the growth of the pay-TV market in the region.

Exhibit 2: Main obstacles to pay-TV growth in AME

Inhibitor	Description
Limited competition	Many markets have only one or two pay-TV providers, and fixed networks in most markets are not yet capable of supporting IPTV. There is almost no cable in AME, so DTH operators have a clear field and have opted to focus on the high-margin upper end of the market rather than extend coverage to middle-income consumers.
Lack of content	Incumbent DTH providers have enough market power and financial clout to win the rights to key premium content (sports and movies). New entrants have difficulty finding content that is affordable and yet still attractive to consumers (see South Africa case study below)
Low GDP per capita	Regional average GDP per capita is only \$3,503; many major markets have much lower levels. Given that most households do not dedicate more than 1-2% of household income toward entertainment and media services, monthly rents would have to drop to near \$10 per month in order to reach the broader adoption seen in other emerging markets.
No affordable mobile platform yet	Mobile technology is clearly the access platform of choice in AME: The mobile sector has by far the most sophisticated infrastructure and distribution networks, and consumers are very comfortable with mobile brands as well as with the prepaid business model. However, traditional pay-TV service is not yet well-adapted to the mobile platform, particularly in Africa, where 3G networks are still comparatively new and 3G end-user devices are too expensive for the average subscriber.

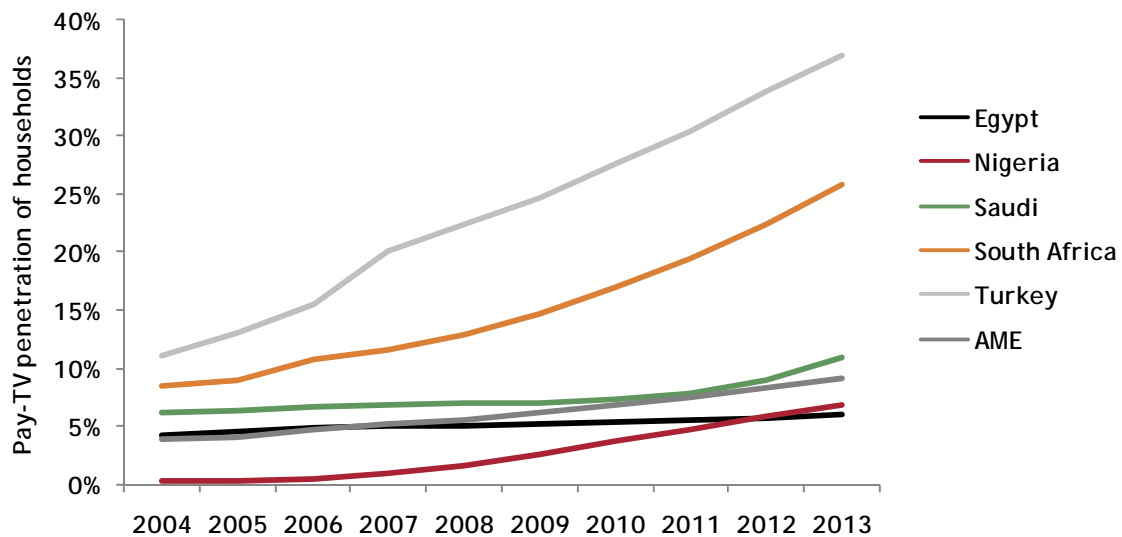
Source: Pyramid Research (2009)

Lack of competition means that pay-TV ARPS is uniformly high across most of AME. Although the average in 2008 was \$25.40, rates can reach as high as \$50 per month in certain markets. The impact that this has on pay-TV adoption varies according to the income level of each market: In Israel's two-player market, for example, pay-TV ARPS is \$58; a high tariff that nevertheless still allows 70% of households to subscribe to pay-TV services. In Nigeria's duopoly, however, the average ARPS of \$48 means that a year of pay-TV services costs as much

as 45% of the average GDP per capita. This rate is clearly prohibitive for the vast majority Nigerians.

The exception to the high-ARPS rule is North Africa, where pay-TV ARPS hovers around \$8 per month. Ironically, however, the removal of one barrier to adoption has created another in its place. Because any household with a satellite dish has more than 300 free-to-air channels to choose from, in Arabic, English and French, pay-TV operators have too much competition rather than too little. This plethora of free content makes viewers quite unwilling to pay subscription fees for anything less than truly premium content (see **Saudi Arabia case study** below). In lower-income Arabic-speaking markets, the problem is further compounded by widespread piracy of pay-TV signals. In Egypt, for example, even though pay-TV ARPS in 2008 was only \$7.19 – a significant but manageable 4% of GDP per capita – only 5% of households legitimately subscribed to a pay-TV service (see **Exhibit 3**).

Exhibit 3: Pay-TV penetration for selected markets in AME, 2008



Source: Pyramid Research

B. Pay-TV markets are poised on the edge of a new period of growth

The outlook, however, has recently become much more encouraging. In the longer term, growth will accelerate significantly as regulatory changes and rising incomes enable new pay-TV entrants to begin tapping the AME's very underpenetrated pay-TV market. Increasingly, regulators in the region are choosing to award "universal" licenses rather than sector-specific licenses, a trend that makes it possible for mobile or new fixed operators to consider adding pay-TV services to their offerings (see **Exhibit 4**). More and more operators are thus looking toward converged services, and building networks capable of supporting them. Not all converged networks will translate directly into IPTV potential, because many operators are using wireless technologies for most or all of their coverage. However, nationwide IPTV-ready fiber networks are being built or planned in wealthy markets such as Bahrain and the UAE, while operators in less well-off markets are considering deploying fiber in at least the wealthier areas of major cities to enable triple-play bundles.

Exhibit 4: Selected licenses recently issued in AME

Country	Date licenses were first issued	Services included in license
Nigeria	March 2006	Fixed, mobile, video and international gateway
Uganda	June 2006	Mobile, WiMAX, MVNO, data transmission, video and international gateway
Rwanda	September 2007	Digital pay-TV and broadband
Equatorial Guinea	March 2008	Fixed, mobile, data, pay-TV and international gateway
Zambia	2009 (not yet issued)	Mobile, Internet, satellite, broadcasting and related services
Namibia	2009 (not yet issued)	Under consideration

Source: Regulators, Pyramid Research

Surprisingly, despite the global economic crisis, the economic forecast for Africa and the Middle East also gives some cause for optimism. GDP per capita in the region is still forecast to rise throughout the forecast period, from \$3,053 in 2008 to \$4,570 in 2013, a nearly 50% increase. Although the Gulf markets in particular will suffer severely from the collapse of the financial markets and the tumbling price of oil, some of the region's most populous markets – including Nigeria and South Africa – are expected to rebound comparatively quickly after the worst of the crisis in 2009-2010.

We also believe that the success and pan-regional expansion of the AME's largest mobile operators will eventually contribute to a rise in pay-TV adoption. Now that operators like MTN, Zain and Etisalat have subsidiaries across tens of countries within the region (countries that often share a common language), it will become possible for them to capitalize on their cross-regional presence to make content purchases more cost-effective. We have seen some pan-African operators, such as Millicom, expand from mobile services to pay-TV in other geographies covered, such as Central America, and we expect a similar evolution in Africa as growth in mobile subscribers begins to taper. These operators' strong balance sheets, furthermore, give them the resources to invest in the relevant infrastructure and premium content. Although their technology might not be quite ready for full-fledged pay-TV services at present, we foresee that many mobile operators may enter the market through alliances with DTH providers, much like Vodacom has done in South Africa, in order to develop a foothold into the market.

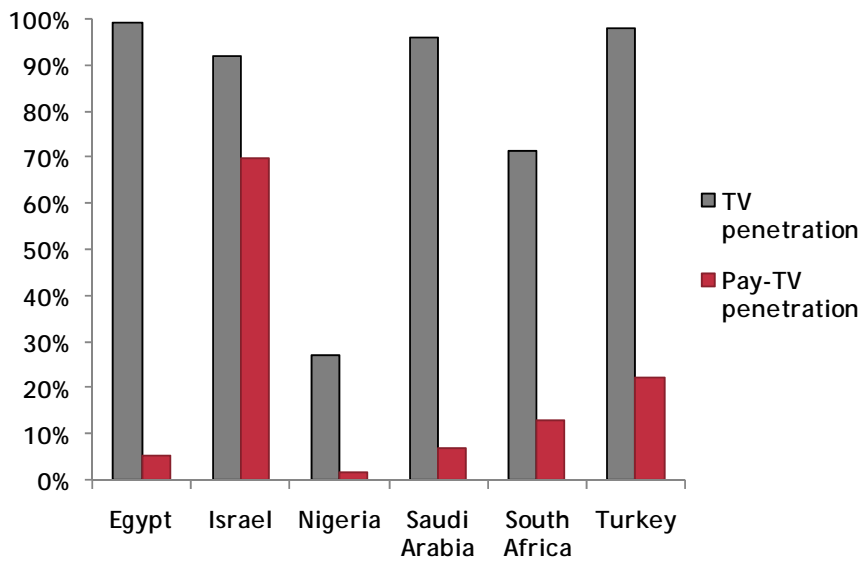
C. Obstacles will not disappear overnight, but we expect strong growth in 2009-2013

Over the next five years, we expect these positive changes in the market environment to improve subscription adoption rates in the region, leading to an overall 13% CAGR in pay-TV subscriptions through 2013, the highest in the world. We expect regional pay-TV revenue to almost double from \$4.5bn in 2008 to \$8.0bn in 2013, equivalent to 0.13% of GDP. Nigeria's pay-TV market will see particularly strong growth: Revenue will grow at a CAGR of 25% from 2008 to 2013, from \$227m to \$679m, as penetration rises from 2% to 7% of all households. Saudi Arabia can also look forward to healthy growth, with revenue increasing at a CAGR of 12% to reach \$106m by 2013, while penetration rises from 7% to 11% over the same period. South Africa's market will remain the largest in terms of revenue, at \$1.1bn by 2013, but its share of

total regional revenue will fall slightly to 13% from 15% as pay-TV adoption begins to pick up elsewhere in the region.

Given the large gap between TV penetration and pay-TV penetration in AME, however – they stood at 38% and 6% respectively in 2008 (see Exhibit 5) – we believe that pay-TV subscriptions and revenue could grow much more quickly than we have forecast if mobile TV technologies improve faster than anticipated, if fixed operators become more aggressive with their DSL or fiber rollouts, or if operators looked at business plans other than the monthly-rent-based plans pushed in more developed markets. Once it becomes possible for mobile operators and IPTV operators to create serious competition for the dominant DTH players, we expect the pay-TV market in AME to begin making up for lost time.

Exhibit 5: Household TV penetration and pay-TV penetration in selected AME markets



Source: Pyramid Research

In the next section of this report, we outline some of the initiatives being taken by regulators and operators in three African and Middle Eastern markets in order to showcase the potential behind pay-TV in the region.

Market detail

CASE STUDY: Pay-TV in Nigeria

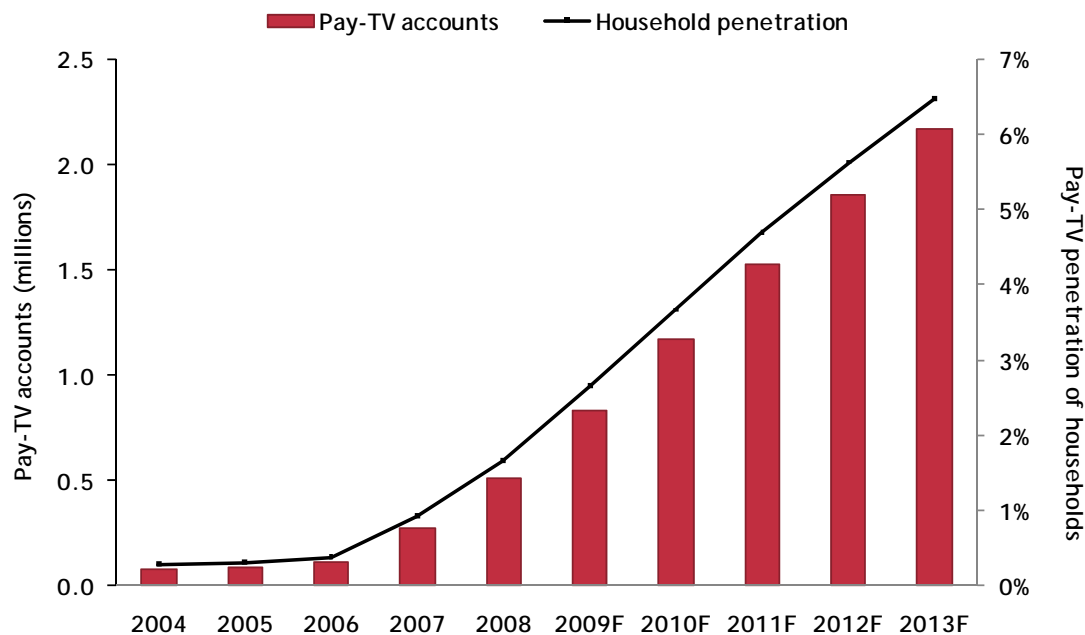
Nigeria represents one of the most attractive opportunities in Africa for pay-TV services over the next five years. The country is currently home to 146m inhabitants, or 12% of the African total, yet pay-TV revenue stood at just \$227m in 2008, roughly 5% of the AME's \$4.5bn market and only 0.1% of GDP (versus the AME's average 0.12% and the developed market's average of 1% of GDP) suggesting that there is plenty of opportunity in this market.

Nigeria's experience with pay-TV is reflective of the many challenges associated with pay-TV deployment in AME. Nigeria's GDP per capita stood at \$1,280 in 2008, suggesting that at \$48.45 per month on average, pay-TV services represent 45% of the average income in the country, a prohibitive figure. Lack of regulatory measures promoting competition in the sector have created a competitive landscape dominated by two DTH operators – DSTV and HiTV – which together control 95% of the pay-TV opportunity in Nigeria. Smaller cable operators have failed to make much of a mark and incumbent fixed operator, Nitel, has not taken the necessary actions to make its network IPTV-ready. The result is that Nigeria remains one of the most underpenetrated pay-TV markets in the world.

There are several trends taking place, however, that suggest that Nigeria's pay-TV sector is ripe for a turnaround. The Economist Intelligence Unit (EIU) projects that incomes in Nigeria will rise nearly 30% over the next five years, reaching \$1,650 by 2013. Also in its favor is the fact that the population is comparatively young: about 65% of Nigerians are under the age of 25. A young population that has grown up around technology (particularly mobile phones) combined with rising incomes makes Nigeria a fertile market for paid entertainment, media and video services. Though the demand picture is improving perhaps more important are changes taking place in the supply dynamics of the market. New entrants in the fixed telecommunications services sector have announced plans to address both the issue of affordability and of infrastructure by building new wireline networks to tap into an untapped market of higher-income individuals with limited access to services. Globacom, MTN and 21st Century are three companies that have announced plans to roll out new copper and fiber networks in 2009. Globacom and 21st Century have also expressed interest in providing triple play packages that combine voice, data and video packages for high end residential and corporate customers. For fixed telecommunications service providers, who are competing for a voice and Internet market currently worth \$1.5bn, the pay-TV market holds tremendous appeal given its potential of generating over \$1bn if it reached other emerging market standards of spending and penetration.

Given rising incomes and the enhanced competition created by the entry of fixed telecoms service providers into the pay-TV space, we expect pay-TV subscriptions to more than quadruple over the next five years, from just over half a million at year-end 2008 to 2.3m at year-end 2013. Household penetration will increase from 2% at year-end 2008 to 7% at year-end 2013. Pay-TV service revenue will increase from \$227m to \$679m as average monthly rates for pay-TV services fall by nearly half from \$48.45 to \$26.93 in light of increased competition (see Exhibit 6).

Exhibit 6: Pay-TV subscriptions by technology and pay-TV household penetration in Nigeria



Source: Pyramid Research, Nigeria Media Forecasts, Q4 2008

CASE STUDY: Pay-TV in Saudi Arabia

Like Nigeria, Saudi Arabia is one of the most underpenetrated pay-TV markets not only in the AME region, but also in the world, with only 7% of households subscribing to a pay-TV service at the end of 2008. Unlike Nigeria, however, Saudi Arabia enjoys certain characteristics that would suggest broader levels of adoption. It has a higher income level (nearly \$18,000 in GDP per capita as of 2008), a high TV household penetration rate (96% in 2008) and more robust competition (three players compete in the DTH space). Nevertheless, Saudi Arabia's pay-TV market generated only \$60m in 2008, roughly 1% of the AME total and 0.01% of Saudi Arabia's GDP. When measured by AME standards of penetration and ARPS, Saudi Arabia's pay-TV market should be worth at least \$1.6bn, suggesting that the potential for this market is great if operators are able to navigate some obstacles.

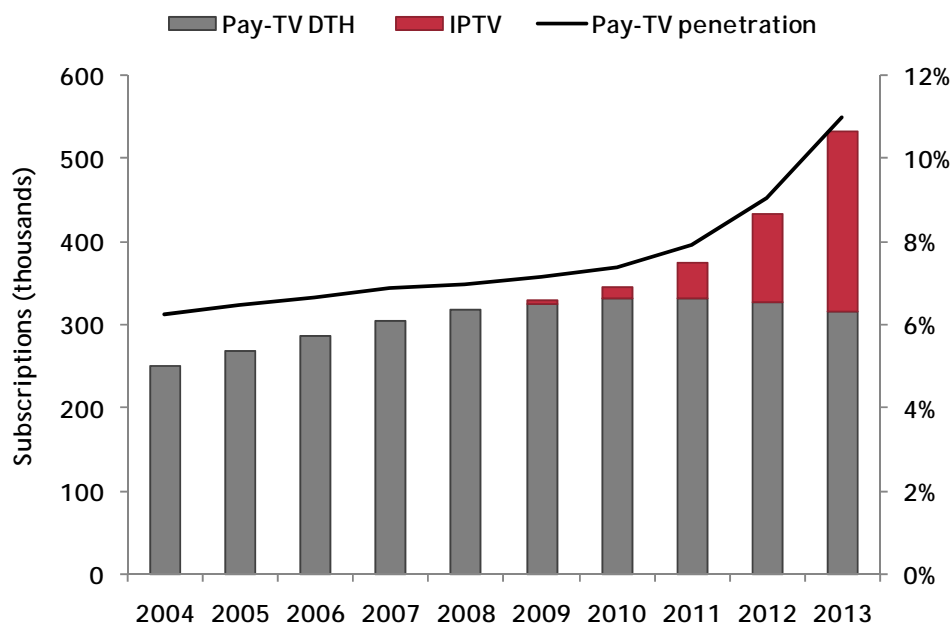
Key among these obstacles is a flourishing free-to-air (FTA) content market. As of mid-2007, there were 327 FTA channels available to the 95% of homes in Saudi Arabia with satellite dishes. Of these, 288, or nearly 90% of all channels, transmitted in Arabic. Unsurprisingly, this wealth of free content drastically reduces the number of people who are willing to pay for satellite TV and puts a cap on the amount that the three pay-TV providers – Showtime Arabia, Orbit and the Arab Radio and Television Network (ART) – can charge for their services. Pay-TV ARPS in Saudi Arabia stood at only \$16 in 2008, nearly 40% lower than the AME average.

Despite these challenges, we see areas of opportunity in Saudi Arabia's pay-TV market. On the demand side, we have seen evidence of a willingness to pay for premium content. Piracy of pay-TV services, rampant in markets such as Egypt and Morocco, is virtually non-existent in Saudi Arabia, since users value their premium content enough to pay full price for it rather than put up with the poor reception problems associated with pirated signals. From a supply perspective, we also see some positive changes. The fixed telecommunications services market is seeing increased activity, with the entry of several new fixed players planned for 2009-2010. While two of these players are deploying WiMAX technologies that may not be suitable for pay-

TV services in the short term, two others have plans for aggressive fiber rollouts. One of these, a consortium led by US-based Verizon Communications, plans to invest \$3bn in a fiber network. The other, Saudi Arabia's second largest mobile operator, Mobily, recently acquired a majority stake in a national fiber network, suggesting that it may be interested in deploying converged products down the road. Not to be outdone, we expect the Saudi incumbent fixed operator, Saudi Telecom Company (STC), which has yet to prepare its network for IPTV, to take more concrete steps toward a triple-play offering in light of the competitive pressures coming from new entrants. It launched its first commercial FTTH offerings in limited areas in December 2008.

Even though we expect little change in subscription and revenue trends in the next two to three years while fixed operators build out their networks, we do expect to see a ramp-up in subscriptions and revenue begin in 2011 as new fiber and IPTV networks come into play (see Exhibit 7). Once IPTV becomes available, we expect its share of the pay-TV market to grow rapidly, accounting for 41% of all subscriptions and 44% of all revenue by 2013. As a result of this new competitive pressure, we expect pay-TV subscriptions to grow at a CAGR of 11% over the forecast period, generating revenue of \$106m in 2013.

Exhibit 7: Pay-TV subscriptions by technology and pay-TV household penetration in Nigeria



Source: Pyramid Research, Saudi Arabia Media Forecasts, Q4 2008.

CASE STUDY: Pay-TV in South Africa

South Africa's pay-TV market generated \$666m in service revenue in 2008, making it the single largest pay-TV market in Africa, accounting for 15% of the region's total revenue. Growth in the pay-TV market has been robust, with subscriptions increasing from 1m to 1.7m over the past four years. This has given South Africa a pay-TV household penetration rate of 12%, twice the AME region's average. Despite this growth, we believe several factors have prevented South Africa's pay-TV market from achieving its full potential.

Chief among these inhibitors is the lack of competition in the country's pay-TV sector. For the past 13 years, there has been only one pay-TV provider in South Africa, DStv, a DTH provider owned by MultiChoice. The lack of cable or IPTV options has kept pay-TV ARPS high, at \$34.71, well out of reach of many in South Africa, where the average income just exceeds US\$6,000 per year.

Given the potential the pay-TV market holds, the South African government has taken several measures in recent years to stimulate competition and foster development of the sector. Most important among these was the award of four pay-TV licenses in mid-2007 to Telkom Media (a division of incumbent fixed operator Telkom South Africa), On Digital Media (ODM), WOWtv and e.tv. Initial results have been disappointing given that new operators have been faced with the daunting, and highly expensive, task of acquiring premium content in a market where MultiChoice has long held a monopoly and maintains significant market power, which it leverages to snap up the broadcasting rights for the most popular sports (particularly Premier League Soccer). Telkom South Africa has put Telkom Media up for sale, while e.tv has given up its license in favor of launching a 24-hour news channel on incumbent DStv's network instead. The remaining two licensees — ODM and WOWtv — have postponed launch until mid-to-late 2009. Although neither has yet offered a convincing strategy for how to solve the content-acquisition problem, we do expect both to launch services by the end of 2009 and to ignite enough competition to add a combined 1m customers over the next five years, a figure on par with MultiChoice's net additions during the same period.

More promising than the addition of two traditional pay-TV operators is the entry of non-traditional players into the market, specifically the entry of Vodacom, South Africa's second largest mobile operator. Vodacom has begun aggressively pursuing the pay-TV opportunity through various avenues. It has more than 40,000 mobile TV viewers who subscribe to its Mobile TV Playa or i-Video services via Vodafone Live! Rates range from R29.00 (\$3.23) per month to R59.00 (\$6.57) per month (see **Exhibit 8**). Since mid-2007 Vodacom has also been reselling DStv pay-TV packages over DTH. Moreover, in cooperation with MultiChoice it has begun pilots of DVB-H service, which it expects to launch commercially in 2010.

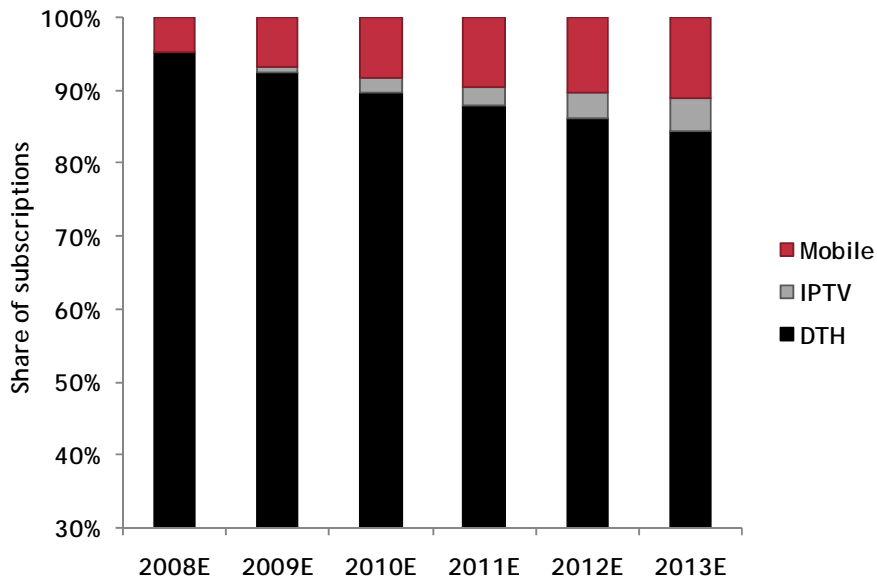
Exhibit 8: Vodacom pay-TV and video packages in South Africa

Service	Monthly rent	Description
	\$3.23 (R29.00)	Selection of up to 10 channels, unlimited viewing per month.
	\$3.34 (R29.99) \$6.57 (R59.99)	25 minutes of standard content per month 25 minutes of standard content and 15 minutes of premium content per month
	\$15.48 (R139)	Access to DStv's standard package of 25 video and four music channels

Source: Vodacom, Pyramid Research South Africa Media Forecasts, Q4 2008.

By leveraging their know-how in prepaid business models, their pay-per-view (PPV) content and their substantial subscriber bases, mobile operators in South Africa can take as much as 10-15% of the pay-TV opportunity in South Africa by 2013 (see Exhibit 9).

Exhibit 9: Pay-TV subscriptions by technology in South Africa, 2008-2013



Source: Pyramid Research South Africa Media Forecasts, Q4 2008.

Conclusions

Key findings

- In our base-case scenario, pay-TV penetration in Africa and the Middle East will increase from 8% of households in 2008 to 11% in 2013, an 11% CAGR, while revenue rises from \$4.5bn to \$8.0bn.
- The main barriers to pay-TV adoption are the low incomes of many potential subscribers, poor or non-existent wireline infrastructure, lack of effective competition in some markets and too much competition from free-to-air alternatives in others, and the difficulty new players have faced in gaining access to premium content.
- New opportunities for pay-TV in the region are developing from regulatory actions aimed at awarding licenses to more players, the entry of new fixed operators keen to deploy copper or fiber-based networks to facilitate the provision of triple-play bundles, and the entry – albeit limited to date – of new mobile operators.
- We believe the main competition to existing DTH providers will come not from cable operators or greenfield pay-TV deployments, but rather from fixed incumbents rolling out IPTV networks and mobile operators that strike resale agreements with pay-TV players to offer triple-play bundles while they await improvements in mobile technology that let them provision similar services.
- Although Israel currently accounts for 23% of the region's pay-TV revenue, its importance will decline over the forecast period. By 2013, it will represent only 13% of the total pay-TV market in AME, while countries like Nigeria will see their contribution to the region's service revenue pie nearly double.
- Our base-case scenario uses conservative penetration and spending assumptions. The market could be worth as much as \$20bn in 2013 if Africa reaches penetration and spending levels seen in other emerging markets, more than twice the figure we have projected.

Recommendations

- **Regulators** – As our South Africa case study shows, new pay-TV licenses are not enough to boost pay-TV competition. AME regulators serious about improving access to pay-TV should note that new entrants will have great difficulty competing with DTH incumbents in content acquisition. As a result, we believe regulatory intervention may be needed to help new operators gain an initial foothold in many AME pay-TV markets.
- **New entrants** – New operators trying to replicate the traditional pay-TV model have failed to make much headway against entrenched DTH providers. We recommend looking at alternative business models, such as pay-per-view or bundled services, as a means to break existing monopolies.
- **Mobile operators** – Given the lack of fixed infrastructure and the under-penetration of the pay-TV market, mobile operators may have the opportunity to become the main pay-TV providers in Africa in the long term. Their popular brand names, expertise in prepaid billing systems, deep pockets and experience in operating in low-income markets would be a valuable resource in gaining pay-TV market share. Although mobile networks in many countries may not be video-ready, we recommend that mobile operators look carefully at launching packages in conjunction with DTH operators in the near term in order to develop brand recognition in the segment prior to their own

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service launch – a strategy employed by fixed telcos in the US in advance of their commercial IPTV deployments.

- **DTH operators** – In the longer term, in the region’s wealthier markets, IPTV and mobile TV could pose serious challenges to DTH’s dominance. Just like mobile and fixed operators have sought out alliances with DTH players to enhance their triple-play capabilities, so too should DTH players look to partner with fixed and mobile operators in order to augment the attractiveness of their offering.
- **Fixed operators** – Since IPTV ARPS in much of Africa and the Middle East will probably be lower than IPTV ARPS in more mature economies, operators should look for other ways to increase their income than boosting ARPS. Detailed market information in the region is usually rare and unreliable, so fixed operators with access to subscribers’ viewing preferences will have a valuable source of data to sell to advertisers.

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Related resources

Recent reports from Pyramid Research

Africa & Middle East Media Forecasts, Q4 2008

Forecasts published February 2009

With telcos and mobile operators increasingly offering TV and video services, Pyramid Research's Media Forecasts are designed to provide competitive intelligence on the pay-TV and mobile TV dynamics for 60 countries as well as regionally and globally. The Media Forecasts track demand patterns for free and paid TV services over terrestrial, satellite and mobile platforms worldwide, providing market share information at both the technology and operator levels as well as five-year adoption and revenue projections.

Otel Drives DSL Adoption with the Middle East's First Fixed-Mobile Bundles

Africa & Middle East Market Perspective published January 2009

Qatar, one of the wealthiest markets in the world, has historically lagged other high-income countries in terms of broadband penetration. At the end of 2006, just as the regulator was about to introduce competition to the market, government-owned Otel launched the region's first and only fixed-mobile bundle. This Perspective examines Otel's strategy in light of its aim to increase DSL adoption and customer retention and forecasts how the operator will use the bundles in a more competitive future

FWA Competition to Limit Globacom's Fixed Network Deployment in Nigeria

Africa & Middle East Market Perspective published January 2009

Despite increasing competition, the Nigerian fixed market is still underserved, leaving ample room for growth. Following recent announcements from operators about deploying fixed wired infrastructure, Pyramid Research believes that Globacom still remains the best positioned operator in the market. This Perspective looks at the intense competition from the fixed wireless operators and how it will affect fixed wired services as well as the mass market.

Fiber in the Last Mile: Best Practices, Adoption Trends and the Impact of the Economic Downturn

Research Report published December 2008

This report examines deployments of FTTx networks in Asia-Pacific, North America and Western Europe, by both telecom incumbents and competitive broadband network operators. Built around extensive case studies, our analysis covers broadband strategies, services, operational and financial performance and best practices. It compares FTTC/VDSL2 networks, GPONs and P2P fiber networks, and provides a five-year outlook on fiber adoption trends, all in light of the ongoing global economic contraction.

Saudi Arabia's Pay-TV Market

Regional Perspective published January 2009

With 25m people and total telecom revenue of US\$11.5bn, the Saudi telecom market is by far the largest in the Arab world. As competition heats up, both new and existing operators are looking into pay-TV to differentiate themselves from competitors and to increase their total ARPS. This Perspective examines whether basic pay-TV services present an attractive opportunity in Saudi Arabia and operators are likely to find the sector profitable.

Services Strategies in Emerging Markets: Alcatel-Lucent Sharpens Focus for 2009

Network Solutions and Strategies Perspective published November 2008

For the first half of 2009, many network equipment vendors will see flat or declining demand for new equipment. But operator and enterprise demand for professional and managed network services should remain favorable throughout the decade. Due to continued rationalization of network technology investments and growing demand for outsourced professional and managed services, we believe Alcatel-Lucent's overall services operation is well-structured for the next decade, and its 2008 performance will be in line or slightly above the growth we forecast for professional and managed services globally.

Communications Markets in Israel

Country Intelligence Report published December 2008

Pyramid Research estimates that Israel's communications market generated \$4.9bn in service revenue in 2007. Over the next five years, growth in the market will lag behind others in the region, since the Israeli market is already more advanced. This Country Intelligence Report analyzes Israel's communications, media and technology industries, including key trends, regulatory pressures and the competitive landscape, making it an excellent complement to our Forecast products.

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